IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

REALTIME DATA LLC d/b/a IXO, 　　　　Plaintiff, 　　v. TEGILE SYSTEMS, INC., WESTERN DIGITAL TECHNOLOGIES, INC., WESTERN DIGITAL CORPORATION, 　　　　Defendants.	C.A. No. _____ **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

This is an action for patent infringement arising under the Patent Laws of the United States of America, 35 U.S.C. § 1 *et seq.* in which Plaintiff Realtime Data LLC d/b/a IXO ("Plaintiff," "Realtime," or "IXO") makes the following allegations against Defendants Tegile Systems, Inc., Western Digital Technologies, Inc., and Western Digital Corporation (collectively, "Tegile Systems," "Western Digital," "Defendant," or "Defendants"):

PARTIES

1.　　Realtime is a limited liability company organized under the laws of the State of New York. Realtime has places of business at 5851 Legacy Circle, Plano, Texas 75024, 1828 E.S.E. Loop 323, Tyler, Texas 75701, and 66 Palmer Avenue, Suite 27, Bronxville, NY 10708. Since the 1990s, Realtime has researched and developed specific solutions for data compression, including, for example, those that increase the speeds at which data can be stored and accessed. As recognition of its innovations rooted in this technological field, Realtime holds 50 United States patents and has numerous pending

patent applications. Realtime has licensed patents in this portfolio to many of the world's leading technology companies. The patents-in-suit relate to Realtime's development of advanced systems and methods for fast and efficient data compression using numerous innovative compression techniques based on, for example, particular attributes of the data.

2.   On information and belief, Defendant Tegile Systems, Inc. is a Delaware corporation with its principal place of business at 7999 Gateway Blvd., Suite 120, Newark, California 94560. Defendants can be served at 7999 Gateway Blvd., Suite 120, Newark, California 94560.

3.   On information and belief, Defendants Western Digital Technologies, Inc. and Western Digital Corporation each is a Delaware corporation with its principal place of business at 5601 Great Oaks Parkway, San Jose, CA. Defendants Western Digital Technologies, Inc. and Western Digital Corporation can be served with process through their registered agent, the Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

4.   Defendants Tegile Systems, Inc. and Western Digital Technologies, Inc. are each wholly owned subsidiary of Western Digital Corporation.

JURISDICTION AND VENUE

5.   This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has original subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6.   This Court has personal jurisdiction over Defendants in this action because Defendants are each incorporated in Delaware and has committed acts within the District

of Delaware giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice. Defendants, directly and through subsidiaries or intermediaries, have committed and continue to commit acts of infringement in this District by, among other things, offering to sell and selling products and/or services that infringe the asserted patents.

7.   Venue is proper in this district under 28 U.S.C. § 1400(b).   Upon information and belief, Defendants are each incorporated in Delaware, has transacted business in the District of Delaware, and has committed acts of direct and indirect infringement in the District of Delaware.

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COUNT I
INFRINGEMENT OF U.S. PATENT NO. 9,054,728

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8.   Plaintiff realleges and incorporates by reference the foregoing paragraphs, as if fully set forth herein.

9.   Plaintiff Realtime is the owner by assignment of United States Patent No. 9,054,728 (the "'728 Patent") entitled "Data compression systems and methods." The '728 Patent was duly and legally issued by the United States Patent and Trademark Office on June 9, 2015. A true and correct copy of the '728 Patent is included as Exhibit A.

10.   On information and belief, Defendants have offered for sale, sold and/or imported into the United States products and services that infringe the '728 patent, and continues to do so. By way of illustrative example, these infringing products and services include, without limitation, Defendants' products and services, *e.g.*, IntelliFlash OS, IntelliStack, IntelliFlash N-Series, IntelliFlash HD, IntelliFlash T-Series, and the system

hardware on which they operate, and all versions and variations thereof since the issuance

of the '728 Patent ("Accused Instrumentalities").

11.   On information and belief, Defendants have directly infringed and

continues to infringe the '728 Patent, for example, by making, selling, offering for sale,

and/or importing the Accused Instrumentalities, and through its own use and testing of

the Accused Instrumentalities, which constitute systems for compressing data claimed by

Claim 1 of the '728 Patent, comprising: a processor; one or more content dependent data

compression encoders; and a single data compression encoder; wherein the processor is

configured: to analyze data within a data block to identify one or more parameters or

attributes of the data wherein the analyzing of the data within the data block to identify

the one or more parameters or attributes of the data excludes analyzing based solely on a

descriptor that is indicative of the one or more parameters or attributes of the data within

the data block; to perform content dependent data compression with the one or more

content dependent data compression encoders if the one or more parameters or attributes

of the data are identified; and to perform data compression with the single data

compression encoder, if the one or more parameters or attributes of the data are not

identified. Upon information and belief, Defendants use the Accused Instrumentalities,

which are infringing systems, for its own internal non-testing business purposes, while

testing the Accused Instrumentalities, and while providing technical support and repair

services for the Accused Instrumentalities to Defendants' customers.

12.   On information and belief, Defendants have had knowledge of the '728

Patent since at least the filing of the original Complaint in this action, or shortly thereafter,

and on information and belief, Defendants knew of the '728 Patent and knew of its infringement, including by way of this lawsuit.

13.   Defendants' affirmative acts of making, using, selling, offering for sale, and/or importing the Accused Instrumentalities have induced and continue to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their normal and customary way on compatible systems to infringe Claim 1 of the '728 Patent, knowing that when the Accused Instrumentalities are used in their ordinary and customary manner with such compatible systems, such systems constitute infringing systems for compressing data comprising; a processor; one or more content dependent data compression encoders; and a single data compression encoder; wherein the processor is configured: to analyze data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block; to perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified; and to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified.   For example, Defendants explain to customers the benefits of using the Accused Instrumentalities, such as by touting their performance advantages: "Data is deduplicated & compressed before it's written to media, minimizing writes and extending   life   of   the   storage   media."   *See* https://www.tegile.com/products/intelliflash/.   For similar reasons, Defendants also

induces its customers to use the Accused Instrumentalities to infringe other claims of the '728 Patent. Defendants specifically intended and was aware that the normal and customary use of the Accused Instrumentalities on compatible systems would infringe the '728 Patent. Defendants performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '728 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Defendants engaged in such inducement to promote the sales of the Accused Instrumentalities, *e.g.,* through Defendants' user manuals, product support, marketing materials, and training materials to actively induce the users of the accused products to infringe the '728 Patent. Accordingly, Defendants have induced and continues to induce end users of the accused products to use the accused products in their ordinary and customary way with compatible systems to make and/or use systems infringing the '728 Patent, knowing that such use of the Accused Instrumentalities with compatible systems will result in infringement of the '728 Patent.

14.   The Accused Instrumentalities include a system for compressing data, comprising a processor. For example, Tegile's IntelliFlash T-Series include Dual multi-core CPUs. *See* https://www.tegile.com/products/hybrid-array/.

Models	T4100	T4200	T4630	T4730	T4760	T4860
Flash as % of Total Usable Capacity	10% Flash		30% Flash		60% Flash	
Controllers	Dual-Active Controller Architecture					
Processors	Dual multi-core CPUs per Controller					
Memory (GB)	256	464	240	464	464	464

15.   The Accused Instrumentalities include a system for compressing data, comprising one or more content dependent data compression encoders. For example, the Accused Instrumentalities perform block-level deduplication, which is a content

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dependent data compression encoder.   For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing.   *See* IntelliFlash Architecture.   Performing deduplication results in compression by representing data with fewer bits.

16.   The Accused Instrumentalities comprise a single data compression encoder. For example, Tegile compresses "data blocks in the DRAM before it writes the data to persistent media. … The following are the available compression algorithms: Lz4 (Default compression algorithm) is the fastest lossless compression method. …   Lzjb provides better performance since CPU utilization is lower. … Gzip-2 provides maximum space savings and acceptable performance." *See* IntelliFlash Architecture.

17.   The Accused Instrumentalities analyze data within a data block to identify one or more parameters or attributes of the data, for example, whether the data is duplicative of data previously transmitted and/or stored, where the analysis does not rely only on the descriptor. For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing. *See* IntelliFlash Architecture.

18.   The Accused Instrumentalities perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified. For example, Tegile

discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing. *See* IntelliFlash Architecture.

19.   The Accused Instrumentalities perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified. For example, Tegile compresses "data blocks in the DRAM before it writes the data to persistent media. … The following are the available compression algorithms: Lz4 (Default compression algorithm) is the fastest lossless compression method. … Lzjb provides better performance since CPU utilization is lower. … Gzip-2 provides maximum space savings and acceptable performance." *See* IntelliFlash Architecture.

20.   Defendants also infringe other claims of the '728 Patent, directly and through inducing infringement and contributory infringement.

21.   On information and belief, use of the Accused Instrumentalities in their ordinary and customary fashion results in infringement of the methods claimed by the '728 Patent.

22.   By making, using, offering for sale, selling and/or importing into the United States the Accused Instrumentalities, and touting the benefits of using the Accused Instrumentalities' compression features, Defendants have injured Realtime and is liable to Realtime for infringement of the '728 Patent pursuant to 35 U.S.C. § 271.

23.   As a result of Defendants' infringement of the '728 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for

Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendants, together with interest and costs as fixed by the Court.

COUNT II
INFRINGEMENT OF U.S. PATENT NO. 9,667,751

24.   Plaintiff realleges and incorporates by reference the foregoing paragraphs, as if fully set forth herein.

25.   Plaintiff Realtime is the owner by assignment of United States Patent No. 9,667,751 (the "'751 Patent") entitled "Data feed acceleration." The '751 Patent was duly and legally issued by the United States Patent and Trademark Office on May 30, 2017. A true and correct copy of the '751 Patent is included as Exhibit B.

26.   On information and belief, Defendants have offered for sale, sold and/or imported into the United States Defendants products and services that infringe the '751 patent, and continues to do so. By way of illustrative example, these infringing products and services include, without limitation, Defendants' products and services, *e.g.*, IntelliFlash OS, IntelliStack, IntelliFlash N-Series, IntelliFlash HD, IntelliFlash T-Series, and the system hardware on which they operate, and all versions and variations thereof since the issuance of the '751 Patent ("Accused Instrumentalities").

27.   On information and belief, Defendants have directly infringed and continues to infringe the '751 Patent, for example, through its own use and testing of the Accused Instrumentalities, which in the ordinary course of their operation form a system for compressing data claimed by Claim 25 of the '751 Patent, including: a data server implemented on one or more processors and one or more memory systems; the data server configured to analyze content of a data block to identify a parameter, attribute, or value of the data block that excludes analysis based solely on reading a descriptor; the

data server configured to select an encoder associated with the identified parameter, attribute, or value; the data server configured to compress data in the data block with the selected encoder to produce a compressed data block, wherein the compression utilizes a state machine; and the data server configured to store the compressed data block; wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form. Upon information and belief, Defendants use the Accused Instrumentalities, which are infringing systems, for its own internal non-testing business purposes, while testing the Accused Instrumentalities, and while providing technical support and repair services for the Accused Instrumentalities to Defendants' customers.

28.   On information and belief, Defendants have had knowledge of the '751 Patent since at least the filing of the original Complaint in this action, or shortly thereafter, and on information and belief, Defendants knew of the '751 Patent and knew of its infringement, including by way of this lawsuit.

29.   Upon information and belief, Defendants' affirmative acts of making, using, and selling the Accused Instrumentalities, and providing implementation services and technical support to users of the Accused Instrumentalities, have induced and continue to induce users of the Accused Instrumentalities to use them in their normal and customary way to infringe Claim 25 of the '751 Patent by making or using a data server implemented on one or more processors and one or more memory systems; the data server configured to analyze content of a data block to identify a parameter, attribute, or value of the data block that excludes analysis based solely on reading a descriptor; the data server configured to select an encoder associated with the identified parameter,

attribute, or value; the data server configured to compress data in the data block with the selected encoder to produce a compressed data block, wherein the compression utilizes a state machine; and the data server configured to store the compressed data block; wherein the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form.   For example, Defendants explain to customers the benefits of using the Accused Instrumentalities, such as by touting their efficiency: "Data is deduplicated & compressed before it's written to media, minimizing writes and extending life of the storage media." *See* https://www.tegile.com/products/intelliflash/.   For similar reasons, Defendants also induces its customers to use the Accused Instrumentalities to infringe other claims of the '751 Patent. Defendants specifically intended and was aware that these normal and customary activities would infringe the '751 Patent. Defendants performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '751 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement.   On information and belief, Defendants engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Defendants have induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '751 Patent, knowing that such use constitutes infringement of the '751 Patent.

30.   The Accused Instrumentalities include a system for compressing data. For example, Tegile's "enables inline deduplication and compression of data so each array

has a usable capacity far greater than its raw capacity." *See* Tegile IntelliFlash Array &

VMware vSphere Best Practice Guide.

31.   The Accused Instrumentalities include a data server implemented on one

or more processors and one or more memory systems. For example, Tegile's IntelliFlash

T-Series include Dual multi-core CPUs. *See* https://www.tegile.com/products/hybrid-

array/.

Models	T4100	T4200	T4630	T4730	T4760	T4860
Flash as % of Total Usable Capacity	10% Flash		30% Flash		60% Flash	
Controllers	Dual-Active Controller Architecture					
Processors	Dual multi-core CPUs per Controller					
Memory (GB)	256	464	240	464	464	464

Moreover, Tegile's IntelliFlash array "features dual active/active controllers and

dualported storage media (SSDs and HDDs)." *See* IntelliFlash Architecture. On

information and belief, all of the Accused Instrumentalities use one or more memory

systems in substantially the same way.

32.   The Accused Instrumentalities include a data server configured to analyze

content of a data block to identify a parameter, attribute, or value of the data block that

excludes analysis based solely on reading a descriptor. For example, Tegile discloses

that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It

uses SHA-256 checksum type for identifying duplicate blocks and retaining unique

blocks. ... The deduplication pointer table is stored in in the performance tier for fast

deduplication processing. *See* IntelliFlash Architecture.

33.   The Accused Instrumentalities include a data server configured to select

an encoder associated with the identified parameter, attribute, or value. For example, the

Accused Instrumentalities select between deduplication or other compression. As such,

Tegile's "enables inline deduplication and compression of data so each array has a usable capacity far greater than its raw capacity." *See* Tegile IntelliFlash Array & VMware vSphere Best Practice Guide. As another example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing." *See* IntelliFlash Architecture.

34.   The Accused Instrumentalities include a data server configured to compress data in the data block with the selected encoder to produce a compressed data block, wherein the compression utilizes a state machine. For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing." *See* IntelliFlash Architecture.

35.   The Accused Instrumentalities include a data server configured to store the compressed data block. For example, the Accused Instrumentalities have storage devices, such as SSDs, that are managed by controllers. In particular, Tegile's IntelliFlash array "features dual active/active controllers and dualported storage media (SSDs and HDDs)." *See* IntelliFlash Architecture. For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing. *See* IntelliFlash Architecture. On information and belief, all of the Accused

Instrumentalities include a data server configured to store the compressed data block in substantially the same way.

36.   The time of the compressing the data block and the storing the compressed data block in the Accused Instrumentalities is less than the time of storing the data block in uncompressed form. Due to the data reduction and acceleration features of the specific compression algorithms used, the time of the compressing the data block and the storing the compressed data block is less than the time of storing the data block in uncompressed form. For example, Tegile discloses that "[D]ata is compressed and redundant blocks are removed before they are written to disk. These techniques not only reduce the storage footprint, they also act as a performance multiplier by maximizing the amount of data cached in high-speed media." *See* IntelliFlash Architecture.

37.   On information and belief, Defendants also infringe, directly and through induced infringement, and continues to infringe other claims of the '751 Patent.

38.   On information and belief, use of the Accused Instrumentalities in their ordinary and customary fashion results in infringement of the methods claimed by the '751 Patent.

39.   By making, using, offering for sale, selling and/or importing into the United States the Accused Instrumentalities, and touting the benefits of using the Accused Instrumentalities' compression features, Defendants have injured Realtime and is liable to Realtime for infringement of the '751 Patent pursuant to 35 U.S.C. § 271.

40.   As a result of Defendants' infringement of the '751 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for

Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendants, together with interest and costs as fixed by the Court.

COUNT III
INFRINGEMENT OF U.S. PATENT NO. 7,415,530

41.   Plaintiff realleges and incorporates by reference the foregoing paragraphs, as if fully set forth herein.

42.   Plaintiff Realtime is the owner by assignment of United States Patent No. 7,415,530 (the "'530 Patent") entitled "System and methods for accelerated data storage and retrieval." The '530 Patent was duly and legally issued by the United States Patent and Trademark Office on August 19, 2008. A true and correct copy of the '530 Patent is included as Exhibit C.

43.   On information and belief, Defendants have made, used, offered for sale, sold and/or imported into the United States Defendants products that infringe the '530 Patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Defendants' products and services, e.g., IntelliFlash OS, IntelliStack, IntelliFlash N-Series, IntelliFlash HD, IntelliFlash T-Series, and the system hardware on which they operate, and all versions and variations thereof since the issuance of the '530 patent ("Accused Instrumentality").

44.   On information and belief, Defendants have directly infringed and continues to infringe the '530 Patent, for example, through its own use and testing of the Accused Instrumentality, which constitutes a system comprising: a memory device; and a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data

accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block. Upon information and belief, Defendants use the Accused Instrumentality, an infringing system, for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support and repair services for the Accused Instrumentality to Defendants' customers.

45.   On information and belief, Defendants have had knowledge of the '530 Patent since at least the filing of this Complaint or shortly thereafter, and on information and belief, Defendants knew of the '530 Patent and knew of its infringement, including by way of this lawsuit.

46.   Upon information and belief, Defendants' affirmative acts of making, using, and selling the Accused Instrumentalities, and providing implementation services and technical support to users of the Accused Instrumentalities, have induced and continue to induce users of the Accused Instrumentalities to use them in their normal and customary way to infringe Claim 1 of the '530 Patent by making or using a system comprising: a memory device; and a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in

received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block.

47.   For example, Defendants explain to customers the benefits of using the Accused Instrumentality: "Data is deduplicated & compressed before it's written to media, minimizing writes and extending life of the storage media." *See* https://www.tegile.com/products/intelliflash/.

48.   Defendants also induces its customers to use the Accused Instrumentalities to infringe other claims of the '530 Patent. Defendants specifically intended and was aware that these normal and customary activities would infringe the '530 Patent. Defendants performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '530 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Defendants engaged in such inducement to promote the use of the Accused Instrumentalities. Accordingly, Defendants have induced and continues to induce users of the accused products to use the accused products in their ordinary and

customary way to infringe the '530 Patent, knowing that such use constitutes infringement of the '530 Patent.

49.   Defendants also indirectly infringes the '530 Patent by manufacturing, using, selling, offering for sale, and/or importing the accused products, with knowledge that the accused products were and are especially manufactured and/or especially adapted for use in infringing the '530 Patent and are not a staple article or commodity of commerce suitable for substantial non-infringing use.   On information and belief, the Accused Instrumentality is designed to function with compatible hardware to create a system comprising: a memory device; and a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block. Because the Accused Instrumentality is designed to operate as the claimed system for compressing, the Accused Instrumentality has no substantial non-infringing uses, and any other uses would be unusual, far-fetched, illusory, impractical, occasional, aberrant, or experimental.   Defendants' manufacture,

use, sale, offering for sale, and/or importation of the Accused Instrumentality constitutes contributory infringement of the '530 Patent.

50.   The Accused Instrumentality includes the memory device and includes the data accelerator, wherein said data accelerator is coupled to said memory device. For example, Tegile's IntelliFlash array "features dual active/active controllers and dualported   storage   media   (SSDs   and   HDDs)."   *See* https://www.tegile.com/products/hybrid-array/.

Models	T4100	T4200	T4630	T4730	T4760	T4860
Flash as % of Total Usable Capacity	10% Flash		30% Flash		60% Flash	
Controllers	Dual-Active Controller Architecture					
Processors	Dual multi-core CPUs per Controller					
Memory (GB)	256	464	240	464	464	464

Moreover, Tegile's "enables inline deduplication and compression of data so each array has a usable capacity far greater than its raw capacity." *See* Tegile IntelliFlash Array & VMware vSphere Best Practice Guide.

51.   The Accused Instrumentality receives an incoming stream of data. For example, Tegile "compresses data blocks in the DRAM before it writes the data to persistent media." *See* IntelliFlash Architecture. As another example, Tegile states that "[D]eduplication eliminates duplicate blocks of data and saves storage space." *See* IntelliFlash Architecture.
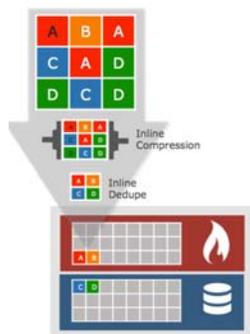
52.   The Accused Instrumentality's received data stream comprise more than one data block. For example, Tegile "compresses data blocks in the DRAM before it writes the data to persistent media." *See* IntelliFlash Architecture. As another example, Tegile states that "[D]eduplication eliminates duplicate blocks of data and saves storage space." *See* IntelliFlash Architecture.
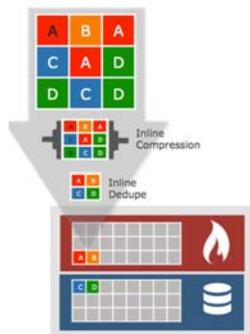
53.   The Accused Instrumentality compresses said data stream to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique. For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing." *See* IntelliFlash Architecture. As

another example, Tegile compresses "data blocks in the DRAM before it writes the data to persistent media. … The following are the available compression algorithms: Lz4 (Default compression algorithm) is the fastest lossless compression method. … Lzjb provides better performance since CPU utilization is lower. … Gzip-2 provides maximum space savings and acceptable performance." *See* IntelliFlash Architecture.

54.   The first and second compression techniques used by the Accused Instrumentality described above are different.   For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing." *See* IntelliFlash Architecture. As another example, Tegile compresses "data blocks in the DRAM before it writes the data to persistent media. … The following are the available compression algorithms: Lz4 (Default compression algorithm) is the fastest lossless compression method. … Lzjb provides better performance since CPU utilization is lower. … Gzip-2 provides maximum space savings and acceptable performance." *See* IntelliFlash Architecture.

55.   After compression, said compressed data stream is stored on said memory device. For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks." *See* IntelliFlash Architecture. As another example, Tegile compresses "data blocks in the DRAM before it writes the data to persistent media." *See* IntelliFlash Architecture.

56.   Said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form. For example, Tegile discloses that "[D]ata is compressed and redundant blocks are removed before they are written to disk. These techniques not only reduce the storage footprint, they also act as a performance multiplier by maximizing the amount of data cached in high-speed media." *See* IntelliFlash Architecture.

57.   The Accused Instrumentality stores a first data descriptor on said memory device indicative of said first compression technique. For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing. *See* IntelliFlash Architecture.

58.   On information and belief, Defendants also infringe, directly and through induced infringement and contributory infringement, and continues to infringe other claims of the '530 Patent.

59.   On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the methods claimed by the '530 Patent.

60.   By making, using, offering for sale, selling and/or importing into the United States the Accused Instrumentalities, and touting the benefits of using the Accused Instrumentalities' compression features, Defendants have injured Realtime and is liable to Realtime for infringement of the '530 Patent pursuant to 35 U.S.C. § 271.

61.   As a result of Defendants' infringement of the '530 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendants, together with interest and costs as fixed by the Court.

COUNT IV
INFRINGEMENT OF U.S. PATENT NO. 9,116,908

62.   Plaintiff Realtime realleges and incorporates by reference the foregoing paragraphs, as if fully set forth herein.

63.   Plaintiff Realtime is the owner by assignment of United States Patent No. 9,116,908 (the "'908 Patent") entitled "System and methods for accelerated data storage and retrieval." The '908 Patent was duly and legally issued by the United States Patent and Trademark Office on August 25, 2015, and Claims 1, 2, 4-6, 9, 11, 21, 22, 24, and 25 of the '908 Patent confirmed as patentable in a Final Written Decision of the Patent Trial and Appeal Board on October 31, 2017. A true and correct copy of the '908 Patent is included as Exhibit D.

64.   On information and belief, Defendants have offered for sale, sold and/or imported into the United States Defendants products and services that infringe the '908 Patent, and continues to do so. By way of illustrative example, these infringing products and services include, without limitation, Defendants' products and services, *e.g.*, IntelliFlash OS, IntelliStack, IntelliFlash N-Series, IntelliFlash HD, IntelliFlash T-Series, and the system hardware on which they operate, and all versions and variations thereof since the issuance of the '908 Patent (the "Accused Instrumentality").

65.   On information and belief, Defendants have directly infringed and continues to infringe the '908 Patent, for example, through its own use and testing of the

Accused Instrumentality, which constitutes a system comprising: a memory device; and a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block; wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form. Upon information and belief, Defendants use the Accused Instrumentality, an infringing system, for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support and repair services for the Accused Instrumentality to Defendants' customers.

66.   On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the systems claimed by the '908 Patent.

67.   On information and belief, Defendants have had knowledge of the '908 Patent since at least the filing of this First Amended Complaint or shortly thereafter, and on information and belief, Defendants knew of the '908 Patent and knew of its infringement, including by way of this lawsuit.

68.   Upon information and belief, Defendants' affirmative acts of making, using, and selling the Accused Instrumentalities, and providing implementation services and technical support to users of the Accused Instrumentalities, have induced and continue to induce users of the Accused Instrumentalities to use them in their normal and customary way to infringe Claim 1 of the '908 Patent by making or using a system

comprising: a memory device; and a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block; wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form. For example, Defendants explain to customers the benefits of using the Accused Instrumentalities, such as by touting their performance advantages: "Data is deduplicated & compressed before it's written to media, minimizing writes and extending life of the storage media." *See* https://www.tegile.com/products/intelliflash/.   For similar reasons, Defendants also induces its customers to use the Accused Instrumentalities to infringe other claims of the '908 Patent. Defendants specifically intended and was aware that these normal and customary activities would infringe the '908 Patent. Defendants performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '908 Patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Defendants engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Defendants have induced and continues to induce users of the accused products to use the accused products in their ordinary and customary way to infringe the '908 Patent, knowing that such use constitutes infringement of the '908 Patent.

69.   The Accused Instrumentality includes a memory device and a data accelerator configured to compress: (i) a first data block with a first compression technique (e.g., deduplication) to provide a first compressed data block; and (ii) a second data block with a second compression technique (e.g., another compression), different from the first compression technique, to provide a second compressed data block. For example, the Accused Instrumentalities also use one or more memory devices, including, e.g., solid state drives (SSDs). As such, Tegile's IntelliFlash array "features dual active/active controllers and dualported storage media (SSDs and HDDs)."   *See* https://www.tegile.com/products/hybrid-array/.

Models	T4100	T4200	T4630	T4730	T4760	T4860
Flash as % of Total Usable Capacity	10% Flash		30% Flash		60% Flash	
Controllers	Dual-Active Controller Architecture					
Processors	Dual multi-core CPUs per Controller					
Memory (GB)	256	464	240	464	464	464

Moreover, Tegile's "enables inline deduplication and compression of data so each array has a usable capacity far greater than its raw capacity." *See* Tegile IntelliFlash Array & VMware vSphere Best Practice Guide.   For example, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks. ... The deduplication pointer table is stored in in the performance tier for fast deduplication processing. *See* IntelliFlash Architecture. As another example, Tegile compresses "data blocks in the DRAM before it writes the data to persistent media. … The following are the available compression algorithms: Lz4 (Default compression algorithm) is the fastest lossless compression method. … Lzjb provides better performance since CPU utilization

is lower. … Gzip-2 provides maximum space savings and acceptable performance." *See* IntelliFlash Architecture.

72. The Accused Instrumentality stores the compressed first and second data blocks on the memory device. For example, Tegile's IntelliFlash array "features dual active/active controllers and dualported storage media (SSDs and HDDs)." *See* https://www.tegile.com/products/hybrid-array/. Moreover, Tegile discloses that "[D]eduplication eliminates duplicate blocks of data and saves storage space. ... It uses SHA-256 checksum type for identifying duplicate blocks and retaining unique blocks." *See* IntelliFlash Architecture. As another example, Tegile compresses "data blocks in the DRAM before it writes the data to persistent media." *See* IntelliFlash Architecture. The compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form. For example, Tegile discloses that "[D]ata is compressed and redundant blocks are removed before they are written to disk. These techniques not only reduce the storage footprint, they also act as a performance multiplier by maximizing the amount of data cached in high-speed media. *See* IntelliFlash Architecture.

71. On information and belief, Defendants also infringe, directly and through induced infringement, and continues to infringe other claims of the '908 Patent.

72. By making, using, offering for sale, selling and/or importing into the United States the Accused Instrumentalities, and touting the benefits of using the Accused Instrumentalities' compression features, Defendants have injured Realtime and is liable to Realtime for infringement of the '908 Patent pursuant to 35 U.S.C. § 271.

73.   As a result of Defendants' infringement of the '908 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendants, together with interest and costs as fixed by the Court.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Realtime respectfully requests that this Court enter:

a.   A judgment in favor of Plaintiff that Defendants have infringed, either literally and/or under the doctrine of equivalents, the '728 Patent, the '751 Patent, the '530 Patent, and the '908 Patent;

b.   A permanent injunction prohibiting Defendants from further acts of infringement of the '728 Patent, the '751 Patent, the '530 Patent, and the '908 Patent;

c.   A judgment and order requiring Defendants to pay Plaintiff its damages, costs, expenses, and prejudgment and post-judgment interest for its infringement of the '728 Patent, the '751 Patent, the '530 Patent, and the '908 Patent; and

d.   A judgment and order requiring Defendants to provide an accounting and to pay supplemental damages to Realtime, including without limitation, prejudgment and post-judgment interest;

e.   A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees against Defendants; and

f.   Any and all other relief as the Court may deem appropriate and just under the circumstances.

DEMAND FOR JURY TRIAL

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Dated: August 20, 2018

OF COUNSEL:

Marc A. Fenster
Reza Mirzaie
Paul A. Kroeger
C. Jay Chung
RUSS AUGUST & KABAT
12424 Wilshire Boulevard, 12th Floor
Los Angeles, CA 90025
(310) 826-7474
mfenster@raklaw.com
rmirzaie@raklaw.com
pkroeger@raklaw.com
jchung@raklaw.com

BAYARD, P.A.
 /s/ Stephen B. Brauerman
Stephen B. Brauerman (#4952)
Sara E. Bussiere (#5725)
600 N. King Street, Suite 400
Wilmington, DE 19801
Phone: (302) 655-5000
sbrauerman@bayardlaw.com
sbussiere@bayardlaw.com

Attorneys for Plaintiff Realtime Data LLC d/b/a IXO