

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

REALTIME DATA LLC d/b/a IXO,

Plaintiff,

v.

HYPERGRID, INC.,

Defendant.

C.A. No. \_\_\_\_\_

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**  
**AGAINST HYPERGRID, INC.**

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 Defendant HyperGrid, Inc. (“HyperGrid” or “Defendant”):

**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, HyperGrid is a Delaware corporation with its principal place of business at 110 Baytech Drive, San Jose, California 95134. HyperGrid can be served through its registered agent, Incorporating Services, LTD, Dover, Delaware 19901.

### **JURISDICTION AND VENUE**

3. 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).

4. This Court has personal jurisdiction over Defendant HyperGrid in this action because HyperGrid is 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 HyperGrid would not offend traditional notions of fair play and substantial justice. HyperGrid, directly and through subsidiaries or intermediaries, has committed and continues 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.

5. Venue is proper in this district under 28 U.S.C. § 1400(b). Upon information and belief, HyperGrid is 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.

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

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

7. 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.

8. On information and belief, HyperGrid has offered for sale, sold and/or imported into the United States HyperGrid 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, HyperGrid’s products and services, *e.g.*, HyperGrid HCI solution, HyperForm, HyperVue, HyperWeave, HyperGrid Appliance, HClass, and the system hardware on which they operate, and all versions and variations thereof since the issuance of the ’728 Patent (“Accused Instrumentalities”).

9. On information and belief, HyperGrid has 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, HyperGrid uses 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 HyperGrid's customers.

10. On information and belief, HyperGrid has 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, HyperGrid knew of the '728 Patent and knew of its infringement, including by way of this lawsuit.

11. HyperGrid's 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, HyperGrid explains to customers the benefits of using the Accused Instrumentalities, such as by touting their performance advantages: “enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. For similar reasons, HyperGrid also induces its customers to use the Accused Instrumentalities to infringe other claims of the '728 Patent. HyperGrid specifically intended and was aware that the normal and customary use of the Accused Instrumentalities on compatible systems would infringe the '728 Patent. HyperGrid 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, HyperGrid engaged in such inducement to promote the sales of the Accused Instrumentalities, e.g., through HyperGrid's user manuals, product support, marketing materials, and training materials to actively induce the users of the accused

products to infringe the '728 Patent. Accordingly, HyperGrid has 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.

12. HyperGrid also indirectly infringes the '728 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 '728 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 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. 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. HyperGrid's manufacture, use, sale, offering for sale, and/or importation of the Accused Instrumentality constitutes contributory infringement of the '728 Patent.

13. The Accused Instrumentalities include a system for compressing data, comprising a processor. For example, the Accused Instrumentalities include "a full-stack solution, combining simple application management, powerful security, governance and control functionality, with software-defined services built on customer's choice of industry-leading infrastructure fabric for compute, all-flash storage, and integrated networking." *See* HyperCloud, Public Cloud Experience Everywhere.

14. 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 dependent data compression encoder. For example, HyperGrid "offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization."

<http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>

Performing deduplication results in compression by representing data with fewer bits.

15. The Accused Instrumentalities comprise a single data compression encoder. For example, HyperGrid "offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM

performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

16. 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, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. As another example, “[D]eduplication (dedup) has become popular in backup systems for eliminating duplicate content across an entire data corpus, often achieving much higher compression ratios. The backup stream is divided into chunks and a collision-resistant hash (e.g., SHA-1) is used as each chunk’s identity. The dedup system maintains a global index of all hashes and uses it to detect duplicates.” <http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.

17. 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, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. As another example, “[D]eduplication (dedup) has become popular in backup systems for



eliminating duplicate content across an entire data corpus, often achieving much higher compression ratios. The backup stream is divided into chunks and a collision-resistant hash (e.g., SHA-1) is used as each chunk's identity. The dedup system maintains a global index of all hashes and uses it to detect duplicates.” <http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.

18. 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, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

19. HyperGrid also infringes other claims of the '728 Patent, directly and through inducing infringement and contributory infringement.

20. 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.

21. 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, HyperGrid has injured Realtime and is liable to Realtime for infringement of the '728 Patent pursuant to 35 U.S.C. § 271.

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

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

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

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

24. 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.

25. On information and belief, HyperGrid has offered for sale, sold and/or imported into the United States HyperGrid 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, HyperGrid's products and services, *e.g.*, HyperGrid HCI solution, HyperForm, HyperVue, HyperWeave, HyperGrid Appliance, HClass, and the system hardware on which they operate, and all versions and variations thereof since the issuance of the '751 Patent ("Accused Instrumentalities").

26. On information and belief, HyperGrid has 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, HyperGrid uses 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 HyperGrid's customers.

27. On information and belief, HyperGrid has 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, HyperGrid knew of the '751 Patent and knew of its infringement, including by way of this lawsuit.

28. Upon information and belief, HyperGrid's 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, HyperGrid explains to customers the benefits of using the Accused Instrumentalities, such as by touting their efficiency: “enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. For similar reasons, HyperGrid also induces its customers to use the Accused Instrumentalities to infringe other claims of the '751 Patent. HyperGrid specifically intended and was aware that these normal and customary activities would infringe the '751 Patent. HyperGrid 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, HyperGrid engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, HyperGrid has 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.

29. HyperGrid also indirectly infringes the '751 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 '751 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 as 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. 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. HyperGrid's manufacture, use, sale, offering for sale, and/or importation of the Accused Instrumentality constitutes contributory infringement of the '751 Patent.

30. The Accused Instrumentalities include a system for compressing data. For example, HyperGrid "offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance

customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

31. The Accused Instrumentalities include a data server implemented on one or more processors and one or more memory systems. For example, the Accused Instrumentality “is available as a full-stack solution, combining simple application management, powerful security, governance and control functionality, with software-defined services built on customer’s choice of industry-leading infrastructure fabric for compute, all-flash storage, and integrated networking.” *See* HyperCloud, Public Cloud Experience Everywhere. 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, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. As another example, “[D]eduplication (dedup) has become popular in backup systems for eliminating duplicate content across an entire data corpus, often achieving much higher compression ratios. The backup stream is divided into chunks and a collision-resistant hash (e.g., SHA-1) is used as each chunk’s identity. The dedup system maintains a global index of all hashes and uses it to detect duplicates.” <http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.

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. For example, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. As another example, “[D]eduplication (dedup) has become popular in backup systems for eliminating duplicate content across an entire data corpus, often achieving much higher compression ratios. The backup stream is divided into chunks and a collision-resistant hash (e.g., SHA-1) is used as each chunk’s identity. The dedup system maintains a global index of all hashes and uses it to detect duplicates.” <http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.

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, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. As another example, “[D]eduplication (dedup) has become popular in backup systems for eliminating duplicate content across an entire data corpus, often achieving much higher compression ratios. The backup stream is divided into chunks and a collision-resistant

hash (e.g., SHA-1) is used as each chunk's identity. The dedup system maintains a global index of all hashes and uses it to detect duplicates." <http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.

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. The Accused Instrumentalities offer "enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization." <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

Moreover, the Accused Instrumentalities provide "a full-stack solution, combining ... all-flash storage, and integrated networking." See HyperCloud, Public Cloud Experience Everywhere. 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, HyperGrid discloses that "[T]he HyperGrid HCI solution not only is more cost effective upfront, but with its reduced energy requirements, elastic supply of all-flash storage and single-pane-of-glass management, also lowers ongoing capital expenditures (CapEx) and initial and ongoing operational expenditures (OpEx)."



<http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

Moreover, HyperGrid “supports 2,400 VMs with 1,536 cores, which, combined with all-flash storage, translate to much faster and more-efficient VMs.”

<http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

37. On information and belief, HyperGrid also infringes, 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, HyperGrid has 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 HyperGrid’s infringement of the ’751 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for HyperGrid’s infringement, but in no event less than a reasonable royalty for the use made of the invention by HyperGrid, 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, HyperGrid has made, used, offered for sale, sold and/or imported into the United States HyperGrid products that infringe the '530 Patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, HyperGrid's products and services, e.g., HyperGrid HCI solution, HyperForm, HyperVue, HyperWeave, HyperGrid Appliance, HClass, and all versions and variations thereof since the issuance of the '530 patent ("Accused Instrumentality").

44. On information and belief, HyperGrid has 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, HyperGrid

uses 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 HyperGrid's customers.

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

46. Upon information and belief, HyperGrid's 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, HyperGrid explains to customers the benefits of using the Accused Instrumentality: “enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

48. HyperGrid also induces its customers to use the Accused Instrumentalities to infringe other claims of the '530 Patent. HyperGrid specifically intended and was aware that these normal and customary activities would infringe the '530 Patent. HyperGrid 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, HyperGrid engaged in such inducement to promote the use of the Accused Instrumentalities. Accordingly, HyperGrid has 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. HyperGrid 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. HyperGrid's 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, HyperGrid "offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and

precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. Moreover, the Accused Instrumentality “is available as a full-stack solution, combining ... all-flash storage, and integrated networking.” See HyperCloud, Public Cloud Experience Everywhere.

51. The Accused Instrumentality receives an incoming stream of data. For example, HyperGrid receives workload of data. (e.g., “HyperGrid’s standard terms and conditions require a commitment of total capacity, which varies based on workload and total contract value.” <https://www.prodec.co.uk/media/1175/hypergrid-the-hypercloud-platform-datasheet-2017.pdf>.)

52. The Accused Instrumentality’s received data stream comprise more than one data block. For example, HyperGrid receives workload of data that comprises of data blocks (e.g., “HyperGrid’s standard terms and conditions require a commitment of total capacity, which varies based on workload and total contract value.” <https://www.prodec.co.uk/media/1175/hypergrid-the-hypercloud-platform-datasheet-2017.pdf>.)

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, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3->

[Aug2016.pdf](#). As another example, “[D]eduplication (dedup) has become popular in backup systems for eliminating duplicate content across an entire data corpus, often achieving much higher compression ratios. The backup stream is divided into chunks and a collision-resistant hash (e.g., SHA-1) is used as each chunk’s identity. The dedup system maintains a global index of all hashes and uses it to detect duplicates.” <http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.

54. The first and second compression techniques used by the Accused Instrumentality described above are different. For example, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. As another example, “[D]eduplication (dedup) has become popular in backup systems for eliminating duplicate content across an entire data corpus, often achieving much higher compression ratios. The backup stream is divided into chunks and a collision-resistant hash (e.g., SHA-1) is used as each chunk’s identity. The dedup system maintains a global index of all hashes and uses it to detect duplicates.” <http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.

55. After compression, said compressed data stream is stored on said memory device. For example, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid->

CompetitiveBrief-VDI-3-Aug2016.pdf. Moreover, the Accused Instrumentality includes a memory devices configured to store compressed data stream. As such, the Accused Instrumentality “is available as a full-stack solution, combining ... all-flash storage, and integrated networking.” *See* HyperCloud, Public Cloud Experience Everywhere.

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, HyperGrid discloses that “[T]he HyperGrid HCI solution not only is more cost effective upfront, but with its reduced energy requirements, elastic supply of all-flash storage and single-pane-of-glass management, also lowers ongoing capital expenditures (CapEx) and initial and ongoing operational expenditures (OpEx).”

<http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

Moreover, HyperGrid “supports 2,400 VMs with 1,536 cores, which, combined with all-flash storage, translate to much faster and more-efficient VMs.”

<http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

57. The Accused Instrumentality stores a first data descriptor on said memory device indicative of said first compression technique. For example, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.”

<http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. As

another example, deduplication service offered by HyperGrid “maintains a global index of all hashes and uses it to detect duplicates.” <http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.



58. On information and belief, HyperGrid also infringes, 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, HyperGrid has 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 HyperGrid's infringement of the '530 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for HyperGrid's infringement, but in no event less than a reasonable royalty for the use made of the invention by HyperGrid, 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, HyperGrid has offered for sale, sold and/or imported into the United States HyperGrid 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, HyperGrid's products and services, *e.g.*, HyperGrid HCI solution, HyperForm, HyperVue, HyperWeave, HyperGrid Appliance, HClass, 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, HyperGrid has 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, HyperGrid uses 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 HyperGrid's 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, HyperGrid has had knowledge of the '908 Patent since at least the filing of this First Amended Complaint or shortly thereafter, and on information and belief, HyperGrid knew of the '908 Patent and knew of its infringement, including by way of this lawsuit.

68. Upon information and belief, HyperGrid's 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, HyperGrid explains to customers the benefits of using the Accused Instrumentalities, such as by touting their performance advantages: "enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance

customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. For similar reasons, HyperGrid also induces its customers to use the Accused Instrumentalities to infringe other claims of the '908 Patent. HyperGrid specifically intended and was aware that these normal and customary activities would infringe the '908 Patent. HyperGrid 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, HyperGrid engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, HyperGrid has 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. HyperGrid also indirectly infringes the '908 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 '908 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 as 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. 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. HyperGrid's manufacture, use, sale, offering for sale, and/or importation of the Accused Instrumentality constitutes contributory infringement of the '908 Patent.

70. 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). For example, the Accused Instrumentality "is available as a full-stack solution, combining simple application management, powerful security, governance and control functionality, with software-defined services built on customer's choice of industry-leading infrastructure fabric for compute, all-flash storage, and integrated networking." *See* HyperCloud, Public Cloud Experience Everywhere. For example, HyperGrid "offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization." <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. As another example, "[D]eduplication (dedup) has become popular in

backup systems for eliminating duplicate content across an entire data corpus, often achieving much higher compression ratios. The backup stream is divided into chunks and a collision-resistant hash (e.g., SHA-1) is used as each chunk's identity. The dedup system maintains a global index of all hashes and uses it to detect duplicates.”

<http://www.pdl.cmu.edu/PDL-FTP/Database/xu-sigmod17.pdf>.

71. The Accused Instrumentality stores the compressed first and second data blocks on the memory device. For example, HyperGrid “offers enterprise-level data services including encryption, deduplication, compression, snapshot, replication, Azure Site Recovery (DR) and precision I/O quality of service (QoS) controls for each VM for unique VM performance customization.” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. Moreover, the Accused Instrumentality includes a memory devices configured to store compressed first and second data blocks. As such, the Accused Instrumentality “is available as a full-stack solution, combining ... all-flash storage, and integrated networking.” See HyperCloud, Public Cloud Experience Everywhere. 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, HyperGrid discloses that “[T]he HyperGrid HCI solution not only is more cost effective upfront, but with its reduced energy requirements, elastic supply of all-flash storage and single-pane-of-glass management, also lowers ongoing capital expenditures (CapEx) and initial and ongoing operational expenditures (OpEx).” <http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>. Moreover, HyperGrid “supports 2,400 VMs with 1,536 cores, which, combined with all-

flash storage, translate to much faster and more-efficient VMs.”

<http://pages.hypergrid.com/hubfs/HyperGrid-CompetitiveBrief-VDI-3-Aug2016.pdf>.

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

73. 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, HyperGrid has injured Realtime and is liable to Realtime for infringement of the '908 Patent pursuant to 35 U.S.C. § 271.

74. As a result of HyperGrid's infringement of the '908 Patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for HyperGrid's infringement, but in no event less than a reasonable royalty for the use made of the invention by HyperGrid, 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 HyperGrid has 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 HyperGrid 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 HyperGrid 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 HyperGrid 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: October 11, 2018

BAYARD, P.A.

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