UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
TYLER DIVISION

REALTIME DATA LLC d/b/a IXO,

Plaintiff,

v.

VEMBU TECHNOLOGIES, INC.,

Defendant.

Case No. 6:16-cv-1037

COMPLAINT FOR PATENT INFRINGEMENT AGAINST VEMBU TECHNOLOGIES, 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 Vembu Technologies, Inc. ("Vembu"):

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 116 Croton Lake Road, Katonah, New York, 10536. Realtime has been registered to do business in Texas since May 2011. 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 47 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 Vembu Technologies, Inc. is a Nevada corporation with its principal place of business in Chennai, India. Upon information and belief, Vembu maintains a place of business at 15301 Spectrum Drive, Suite 155, Addison, TX 75001. See https://www.vembu.com/contact-us/. On information and belief, Vembu can be served through its registered agent, Lenin Srinivasan, 15301 Spectrum Drive, Suite 155, Addison, TX 75001.

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 Vembu in this action because Vembu has committed acts within the Eastern District of Texas giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over Vembu would not offend traditional notions of fair play and substantial justice. Vembu, 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. Upon information and belief, Vembu maintains a place of business in Texas at 15301 Spectrum Drive, Suite 155, Addison, TX 75001. Vembu is registered to do business in the State of Texas.

5. Venue is proper in this district under 28 U.S.C. §§ 1391(b), 1391(c) and 1400(b). Vembu is registered to do business in Texas, and upon information and belief, has transacted business in the Eastern District of Texas and has committed acts of direct and indirect infringement in the Eastern District of Texas. Upon information and belief, Vembu maintains a place of business in Texas at 15301 Spectrum Drive, Suite 155, Addison, TX 75001.

COUNT I

INFRINGEMENT OF U.S. PATENT NO. 7,161,506

6. Plaintiff realleges and incorporates by reference paragraphs 1-5 above, as if fully

set forth herein.

7. Plaintiff Realtime is the owner by assignment of United States Patent No. 7,161,506 ("the '506 patent") entitled "Systems and methods for data compression such as content dependent data compression." The '506 patent was duly and legally issued by the United States Patent and Trademark Office on January 9, 2007. A true and correct copy of the '506 patent, including its reexamination certificates, is included as Exhibit A.

Vembu BDR Suite

8. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '506 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.,* Vembu BDR Suite, including but not limited to Vembu BDR Suite v3.5.0, and/or its subcomponents, whether released on a standalone basis or as bundled together in Vembu BDR Suite, including but not limited to Vembu VMBackup, Vembu ImageBackup, Vembu NetworkBackup, Vembu OnlineBackup, Vembu SaaSBackup, Vembu OffsiteDR, Vembu CloudDR, Vembu BDR360, and Vembu Universal Explorer, Vembu FileShare (SyncBlaze), and all versions and variations thereof since the issuance of the '506 patent ("Accused Instrumentality").

9. On information and belief, Vembu has directly infringed and continues to infringe the '506 patent, for example, through its own use and testing of the Accused Instrumentality to practice compression methods claimed by Claim 104 of the '506 patent, namely, a computer implemented method for compressing data, comprising: analyzing data within a data block of an input data stream to identify one or more data types of the data block, the input data stream comprising a plurality of disparate data types; performing content dependent data compression with a content dependent data compression encoder if a data type of the data block is identified; and performing data compression with a single data compression encoder, if a data type of the data block is not identified, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of

the data within the data block. Upon information and belief, Vembu uses the Accused Instrumentality to practice infringing methods for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support, maintenance and repair services for the Accused Instrumentality to Vembu's customers.

10. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "A computer implemented method for compressing data". This system minimizes the amount of data transmitted over a network and stored on a backup device. The Accused Instrumentality employs several data compression techniques to achieve this goal. *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server. Also, in Vembu's case, data de-duplication employs what is knows as an "in-line" process to help speed performance. … As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage. … 90% Reduction in Storage Requirements … 75% Faster Data Transmission over WAN … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

11. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "analyzing data within a data block of an input data stream to identify one or more data types of the data block, the input data stream comprising a plurality of disparate data types". Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "analyzing data within a data block of an input data stream to identify one or more data types of the data block, the input data

stream comprising a plurality of disparate data types" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5-7 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created.

Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy.").

12. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "performing content dependent data compression with a content dependent data compression encoder if a data type of the data block is identified". Even if the deduplication function in the Accused Instrumentality were found to not literally meet the "performing content dependent data compression with a content dependent data compression encoder if a data type of the data block is identified" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, deduplication performs substantially the same function (for example, reducing the overall amount of bits to store) in substantially the same way (by, for example, applying a technique based on the specific content of the incoming data in order to present for storage fewer overall bits) to achieve substantially the same result (for example, storage of fewer bits of data overall). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5, 7, 10 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original

block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created. Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy … We use variable length block-based deduplication, which has been explained at length earlier in this whitepaper. But that's not all. With VembuFS we have facilitated a target based global de-duplication scheme.").

13. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "performing data compression with a single data compression encoder, if a data type of the data block is not identified". *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10 ("As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage.").

14. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block." Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the

data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5, 7, 10 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created. Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy … We use variable length block-based deduplication, which has been explained at length earlier in this whitepaper. But that's not all. With VembuFS we have facilitated a target based global de-duplication scheme.").

15. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '506 patent, for similar reasons as explained above with respect to Claim 104 of the '506 patent.

16. On information and belief, all of the Accused Instrumentalities perform the claimed

methods in substantially the same way. *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 17-18 ("*Does deduplication work on Vembu FileShare (SyncBlaze)?* Vembu provides both Backup & Disaster recovery (BDR) as well as file sharing & collaboration offerings (Vembu FileShare), both of which leverage one unified and foundational infrastructure platform. … Our deduplication technology, implemented at an infrastructure level, will therefore be leveraged across all the associated usage scenarios for our Vembu FileShare solution whether it is deployed either as standalone offering or as part of a bundled offering with the Vembu BDR solution.").

17. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the methods claimed by the '506 patent.

18. On information and belief, Vembu has had knowledge of the '506 patent at least since the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the '506 patent and knew of its infringement, including by way of this lawsuit.

19. Upon information and belief, Vembu'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 104 of the '506 patent by practicing a computer implemented method comprising: receiving a data block in an uncompressed form, said data block being included in a data stream; analyzing data within the data block to determine a type of said data block; and compressing said data block to provide a compressed data block, wherein if one or more encoders are associated to said type, compressing said data block with at least one of said one or more encoders, otherwise compressing said data block with a default data compression encoder, and wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block. For example, Vembu instructs users of the Vembu BDR Suite about the advantages of its deduplication and compression features: "Vembu Solution • Global, Variable Length Block Deduplication • 90% Reduction in

Storage Requirements • 75% Faster Data Transmission over WAN … • 80% faster backups • 80% reduction in backup windows … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.". See https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11. Thus, with knowledge of the '506 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '506 patent, knowing that such use constituted infringement of the '506 patent.

20. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '506 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '506 patent. Vembu performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '506 patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '506 patent, knowing that such use constitutes infringement of the '506 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '506 patent pursuant to 35 U.S.C. § 271.

22. As a result of Vembu's infringement of the '506 patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, together with interest and costs as fixed by the Court.

Vembu StoreGrid

23. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '506 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu StoreGrid, including but not limited to StoreGrid Cloud, StoreGrid Service Provider Edition (StoreGrid SP), StoreGrid Hosting Provider Edition, and StoreGrid Professional Edition (StoreGrid Pro), and all versions and variations thereof since the issuance of the '506 patent ("Accused Instrumentality").

24. On information and belief, Vembu has directly infringed and continues to infringe the '506 patent, for example, through its own use and testing of the Accused Instrumentality to practice compression methods claimed by Claim 104 of the '506 patent, namely, a computer implemented method for compressing data, comprising: analyzing data within a data block of an input data stream to identify one or more data types of the data block, the input data stream comprising a plurality of disparate data types; performing content dependent data compression with a content dependent data compression encoder if a data type of the data block is identified; and performing data compression with a single data compression encoder, if a data type of the data block is not identified, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block. Upon information and belief, Vembu uses the Accused Instrumentality to practice infringing methods for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support, maintenance and repair services for the Accused Instrumentality to Vembu's customers.

25. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "A computer implemented method for compressing data". This system minimizes the amount of data transmitted over a network and stored on a backup device. The Accused Instrumentality employs several data compression techniques to achieve this goal. *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-

solution/ ("Automatic incremental backup and compression that saves on disk space and bandwidth").

26. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "analyzing data within a data block of an input data stream to identify one or more data types of the data block, the input data stream comprising a plurality of disparate data types". Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "analyzing data within a data block of an input data stream to identify one or more data types of the data block, the input data stream comprising a plurality of disparate data types" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation."); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup

of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

27. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "performing content dependent data compression with a content dependent data compression encoder if a data type of the data block is identified". Even if the deduplication function in the Accused Instrumentality were found to not literally meet the "performing content dependent data compression with a content dependent data compression encoder if a data type of the data block is identified" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, deduplication performs substantially the same function (for example, reducing the overall amount of bits to store) in substantially the same way (by, for example, applying a technique based on the specific content of the incoming data in order to present for storage fewer overall bits) to achieve substantially the same result (for example, storage of fewer bits of data overall). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation."); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous

incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

28. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "performing data compression with a single data compression encoder, if a data type of the data block is not identified". *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks … The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

29. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block." Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the

"wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation."); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level

Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

30. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '506 patent, for similar reasons as explained above with respect to Claim 104 of the '506 patent.

31. On information and belief, all of the Accused Instrumentalities perform the claimed methods in substantially the same way.

32. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the methods claimed by the '506 patent.

33. On information and belief, Vembu has had knowledge of the '506 patent at least since the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the '506 patent and knew of its infringement, including by way of this lawsuit.

34. Upon information and belief, Vembu'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 104 of the '506 patent by practicing a computer implemented method comprising: receiving a data block in an uncompressed form, said data block being included in a data stream; analyzing data within the data block to determine a type of said data block; and compressing said data block to provide a compressed data block, wherein if one or more encoders are associated to said type, compressing said data block with at least one of said one or more encoders, otherwise compressing said data block with a default data compression encoder, and wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block. For example, Vembu instructs users of the Vembu StoreGrid about the advantages of its incremental backup and compression features. *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and

intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center."). Thus, with knowledge of the '506 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '506 patent, knowing that such use constituted infringement of the '506 patent.

35. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '506 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '506 patent. Vembu performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '506 patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '506 patent, knowing that such use constitutes infringement of the '506 patent.

36. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '506 patent pursuant to 35 U.S.C. § 271.

37. As a result of Vembu's infringement of the '506 patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, together with interest and costs as fixed by the Court.

COUNT II

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

38. Plaintiff Realtime realleges and incorporates by reference paragraphs 1-37 above, as if fully set forth herein.

39. 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 B.

Vembu BDR Suite

40. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '728 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.,* Vembu BDR Suite, including but not limited to Vembu BDR Suite v3.5.0, and/or its subcomponents, whether released on a standalone basis or as bundled together in Vembu BDR Suite, including but not limited to Vembu VMBackup, Vembu ImageBackup, Vembu NetworkBackup, Vembu OnlineBackup, Vembu SaaSBackup, Vembu OffsiteDR, Vembu CloudDR, Vembu BDR360, and Vembu Universal Explorer, Vembu FileShare (SyncBlaze), and all versions and variations thereof since the issuance of the '728 patent ("Accused Instrumentality").

41. On information and belief, Vembu has directly infringed and continues to infringe the '728 patent, for example, through its own use and testing of the Accused Instrumentality, 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, NetApp 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 for the Accused Instrumentality to Vembu's customers.

42. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "A system for compressing data comprising; a processor; one or more content dependent data compression encoders". Even if the deduplication function in the Accused Instrumentality were found to not literally meet the "one or more content dependent data compression encoders" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, deduplication performs substantially the same function (for example, reducing the overall amount of bits to store) in substantially the same way (by, for example, applying a technique based on the specific content of the incoming data in order to present for storage fewer overall bits) to achieve substantially the same result (for example, storage of fewer bits of data overall). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server. Also, in Vembu's case, data de-duplication employs

what is knows as an "in-line" process to help speed performance. … As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage. … 90% Reduction in Storage Requirements … 75% Faster Data Transmission over WAN … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

43. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "a single data compression encoder." *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10 ("As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage.").

44. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "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". *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5, 7, 10 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of

that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created. Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy … We use variable length block-based deduplication, which has been explained at length earlier in this whitepaper. But that's not all. With VembuFS we have facilitated a target based global de-duplication scheme.").

45. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "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". Even if the deduplication function in the Accused Instrumentality were found to not literally meet the "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" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, deduplication performs substantially the same function (for example, reducing the overall amount of bits to store) in substantially the same way (by, for example, applying a technique based on the specific content of the incoming data in order to present for storage fewer overall bits) to achieve substantially the same result (for example, storage of fewer bits of data overall). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5, 7, 10 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the

system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created. Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy … We use variable length block-based deduplication, which has been explained at length earlier in this whitepaper. But that's not all. With VembuFS we have facilitated a target based global de-duplication scheme.").

46. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified". *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10 ("As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage.").

47. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '728 patent, for similar reasons as explained above with respect to Claim 1 of the '728 patent.

48. On information and belief, all of the Accused Instrumentalities operate in substantially the same way. *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 17-18 ("*Does deduplication work on Vembu FileShare (SyncBlaze)?* Vembu provides both Backup & Disaster recovery (BDR)

as well as file sharing & collaboration offerings (Vembu FileShare), both of which leverage one unified and foundational infrastructure platform. … Our deduplication technology, implemented at an infrastructure level, will therefore be leveraged across all the associated usage scenarios for our Vembu FileShare solution whether it is deployed either as standalone offering or as part of a bundled offering with the Vembu BDR solution.").

49. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the systems claimed by the '728 patent.

50. On information and belief, Vembu has had knowledge of the '728 patent since at least the filing of the original Complaint or shortly thereafter, and on information and belief, Vembu knew of the '728 patent and knew of its infringement, including by way of this lawsuit.

51. Upon information and belief, Vembu'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 the '728 patent by making or using 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. For example, Vembu instructs users of the Vembu BDR Suite about the advantages of its deduplication and compression features: "Vembu Solution • Global, Variable Length Block Deduplication • 90% Reduction in Storage Requirements • 75% Faster Data Transmission over WAN … • 80% faster backups • 80% reduction in backup windows … As a

result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.". See https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11. Thus, with knowledge of the '728 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '728 patent, knowing that such use constituted infringement of the '728 patent.

52. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '728 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '728 patent. Vembu 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, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '728 patent, knowing that such use constitutes infringement of the '728 patent.

53. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '728 patent pursuant to 35 U.S.C. § 271.

54. As a result of Vembu's infringement of the '728 patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, together with interest and costs as fixed by the Court.

Vembu StoreGrid

55. On information and belief, Vembu has made, used, offered for sale, sold and/or

imported into the United States Vembu products that infringe the '728 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu StoreGrid, including but not limited to StoreGrid Cloud, StoreGrid Service Provider Edition (StoreGrid SP), StoreGrid Hosting Provider Edition, and StoreGrid Professional Edition (StoreGrid Pro), and all versions and variations thereof since the issuance of the '728 patent ("Accused Instrumentality").

56. On information and belief, Vembu has directly infringed and continues to infringe the '728 patent, for example, through its own use and testing of the Accused Instrumentality, 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, NetApp 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 for the Accused Instrumentality to Vembu's customers.

57. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "A system for compressing data comprising; a processor; one or more content dependent data compression encoders". Even if the deduplication function in the Accused Instrumentality were found to not literally meet the "one or more content dependent data compression encoders" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, deduplication

performs substantially the same function (for example, reducing the overall amount of bits to store) in substantially the same way (by, for example, applying a technique based on the specific content of the incoming data in order to present for storage fewer overall bits) to achieve substantially the same result (for example, storage of fewer bits of data overall). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

58. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "a single data compression encoder." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); http://storegrid.vembu.com/online-backup/help/linux-

installation-guide.html ("StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks … The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

59. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "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". *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

60. The Accused Instrumentality satisfies literally and/or under the doctrine of

equivalents the claim requirement "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". Even if the deduplication function in the Accused Instrumentality were found to not literally meet the "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" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, deduplication performs substantially the same function (for example, reducing the overall amount of bits to store) in substantially the same way (by, for example, applying a technique based on the specific content of the incoming data in order to present for storage fewer overall bits) to achieve substantially the same result (for example, storage of fewer bits of data overall). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored

in a compressed format in the repository.").

61. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified". *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks … The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

62. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '728 patent, for similar reasons as explained above with respect to Claim 1 of the '728 patent.

63. On information and belief, all of the Accused Instrumentalities operate in substantially the same way.

64. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the systems claimed by the '728 patent.

65. On information and belief, Vembu has had knowledge of the '728 patent since at least the filing of the original Complaint or shortly thereafter, and on information and belief, Vembu knew of the '728 patent and knew of its infringement, including by way of this lawsuit.

66. Upon information and belief, Vembu'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 the '728 patent by making or using 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. For example, Vembu instructs users of the Vembu StoreGrid about the advantages of its incremental backup and compression features. *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center."). Thus, with knowledge of the '728 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '728 patent, knowing that such use constituted infringement of the '728 patent.

67. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '728 patent. Vembu specifically intended and was

aware that these normal and customary activities would infringe the '728 patent. Vembu 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, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '728 patent, knowing that such use constitutes infringement of the '728 patent.

68. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '728 patent pursuant to 35 U.S.C. § 271.

69. As a result of Vembu's infringement of the '728 patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, together with interest and costs as fixed by the Court.

COUNT III

INFRINGEMENT OF U.S. PATENT NO. 7,378,992

70. Plaintiff realleges and incorporates by reference paragraphs 1-69 above, as if fully set forth herein.

71. Plaintiff Realtime is the owner by assignment of United States Patent No. 7,378,992 ("the '992 patent") entitled "Content independent data compression method and system." The '992 patent was duly and legally issued by the United States Patent and Trademark Office on May 27, 2008. A true and correct copy of the '992 patent, including its reexamination certificates, is included as Exhibit C.

Vembu BDR Suite

72. On information and belief, Vembu has made, used, offered for sale, sold and/or

imported into the United States Vembu products that infringe the '992 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu BDR Suite, including but not limited to Vembu BDR Suite v3.5.0, and/or its subcomponents, whether released on a standalone basis or as bundled together in Vembu BDR Suite, including but not limited to Vembu VMBackup, Vembu ImageBackup, Vembu NetworkBackup, Vembu OnlineBackup, Vembu SaaSBackup, Vembu OffsiteDR, Vembu CloudDR, Vembu BDR360, and Vembu Universal Explorer, Vembu FileShare (SyncBlaze), and all versions and variations thereof since the issuance of the '992 patent ("Accused Instrumentality").

73. On information and belief, Vembu has directly infringed and continues to infringe at least claim 48 of the '992 patent, for example, through its own use and testing of the Accused Instrumentalities to practice compression methods claimed by the '992 patent, including a computer implemented method comprising: receiving a data block; associating at least one encoder to each one of several data types; analyzing data within the data block to identify a first data type of the data within the data block; compressing if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said one of said several data types that is the same as said first data type to provide a compressed data block; and compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block. Upon information and belief, Vembu uses the Accused Instrumentality to practice infringing methods for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support for the Accused Instrumentality to Vembu's customers.

74. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "a computer implemented method comprising: receiving a data block". *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11

("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server.").

75. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "associating at least one encoder to each one of several data types." Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "associating at least one encoder to each one of several data types" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5-7 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine

will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created. Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy.").

76. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "analyzing data within the data block to identify a first data type of the data within the data block". Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "analyzing data within the data block to identify a first data type of the data within the data block" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression

method from among multiple available data compression methods). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5-7 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created. Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy.").

77. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "compressing if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said one of said several data types that is the same as said first data type to provide a compressed data block". Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "compressing if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said one of said several data types that is the same as said first data type to provide a compressed data

block" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5-7 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created.

Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy.").

78. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block." Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10 ("As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also

compressed in parallel to ensure accumulative savings on storage.").

79. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '992 patent, for similar reasons as explained above with respect to Claim 48 of the '992 patent.

80. On information and belief, all of the Accused Instrumentalities perform the claimed methods in substantially the same way. *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 17-18 ("*Does deduplication work on Vembu FileShare (SyncBlaze)?* Vembu provides both Backup & Disaster recovery (BDR) as well as file sharing & collaboration offerings (Vembu FileShare), both of which leverage one unified and foundational infrastructure platform. … Our deduplication technology, implemented at an infrastructure level, will therefore be leveraged across all the associated usage scenarios for our Vembu FileShare solution whether it is deployed either as standalone offering or as part of a bundled offering with the Vembu BDR solution.").

81. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the methods claimed by the '992 patent.

82. On information and belief, Vembu has had knowledge of the '992 patent since at least the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the '992 patent and knew of its infringement, including by way of this lawsuit.

83. Vembu'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 to infringe the '992 patent by practicing compression methods claimed by the '992 patent, including a computer implemented method comprising: receiving a data block; associating at least one encoder to each one of several data types; analyzing data within the data block to identify a first data type of the data within the data block; compressing if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said one of said several data types that is the same as said first data type to provide a compressed data block;

and compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block. For example, Vembu instructs users of the Vembu BDR Suite about the advantages of its deduplication and compression features: "Vembu Solution • Global, Variable Length Block Deduplication • 90% Reduction in Storage Requirements • 75% Faster Data Transmission over WAN … • 80% faster backups • 80% reduction in backup windows … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.". See https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11. Thus, with knowledge of the '992 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '992 patent, knowing that such use constituted infringement of the '992 patent.

84. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '992 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '992 patent. Vembu performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '992 patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '992 patent, knowing that such use constitutes infringement of the '992 patent.

85. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '992 patent pursuant to 35 U.S.C. § 271.

86. As a result of Vembu's infringement of the '992 patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, together with interest and costs as fixed by the Court.

Vembu StoreGrid

87. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '992 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu StoreGrid, including but not limited to StoreGrid Cloud, StoreGrid Service Provider Edition (StoreGrid SP), StoreGrid Hosting Provider Edition, and StoreGrid Professional Edition (StoreGrid Pro), and all versions and variations thereof since the issuance of the '992 patent ("Accused Instrumentality").

88. On information and belief, Vembu has directly infringed and continues to infringe at least claim 48 of the '992 patent, for example, through its own use and testing of the Accused Instrumentalities to practice compression methods claimed by the '992 patent, including a computer implemented method comprising: receiving a data block; associating at least one encoder to each one of several data types; analyzing data within the data block to identify a first data type of the data within the data block; compressing if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said one of said several data types that is the same as said first data type to provide a compressed data block; and compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block. Upon information and belief, Vembu uses the Accused Instrumentality to practice infringing methods for its own

internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support for the Accused Instrumentality to Vembu's customers.

89. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "a computer implemented method comprising: receiving a data block". *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation.").

90. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "associating at least one encoder to each one of several data types." Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "associating at least one encoder to each one of several data types" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates

incremental backup automatically, saving the user thousands of dollars by bandwidth conservation."); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

91. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "analyzing data within the data block to identify a first data type of the data within the data block". Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "analyzing data within the data block to identify a first data type of the data within the data block" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant

to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation."); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

92. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "compressing if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said one of said several data types that is the same as said first data type to provide a compressed data block". Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "compressing if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said

one of said several data types that is the same as said first data type to provide a compressed data block" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation."); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only

one copy of a data block, across all clients, is stored in a compressed format in the repository.").

93. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block." Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression

that saves on disk space and bandwidth"); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks … The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

94. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '992 patent, for similar reasons as explained above with respect to Claim 48 of the '992 patent.

95. On information and belief, all of the Accused Instrumentalities perform the claimed methods in substantially the same way.

96. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the methods claimed by the '992 patent.

97. On information and belief, Vembu has had knowledge of the '992 patent since at least the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the '992 patent and knew of its infringement, including by way of this lawsuit.

98. Vembu'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 to infringe the '992 patent by practicing compression methods claimed by the '992 patent, including a computer implemented method comprising: receiving a data block; associating at least one encoder to each one of several data types; analyzing data within the data block to identify a first data type of the data within the data block; compressing if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said one of said several data types that is the same as said first data type to provide a compressed data block; and compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block, wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a

descriptor that is indicative of the data type of the data within the data block. For example, Vembu instructs users of the Vembu StoreGrid about the advantages of its incremental backup and compression features. *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center."). Thus, with knowledge of the '992 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '992 patent, knowing that such use constituted infringement of the '992 patent.

99. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '992 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '992 patent. Vembu performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '992 patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '992 patent, knowing that such use constitutes infringement of the '992 patent.

100. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '992 patent pursuant to 35 U.S.C. § 271.

101. As a result of Vembu's infringement of the '992 patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, together with interest and costs as fixed by the Court.

COUNT IV

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

102. Plaintiff Realtime realleges and incorporates by reference paragraphs 1-101 above, as if fully set forth herein.

103. 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, including its reexamination certificate, is included as Exhibit D.

Vembu BDR Suite

104. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '530 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu BDR Suite, including but not limited to Vembu BDR Suite v3.5.0, and/or its subcomponents, whether released on a standalone basis or as bundled together in Vembu BDR Suite, including but not limited to Vembu VMBackup, Vembu ImageBackup, Vembu NetworkBackup, Vembu OnlineBackup, Vembu SaaSBackup, Vembu OffsiteDR, Vembu CloudDR, Vembu BDR360, and Vembu Universal Explorer, Vembu FileShare (SyncBlaze), and all versions and variations thereof since the issuance of the '530 patent

("Accused Instrumentality").

105. On information and belief, Vembu has directly infringed and continues to infringe at least Claim 1 of the '530 patent, for example, through its own use, testing, sale, offer for sale, and/or importation of the Accused Instrumentalities and computer systems running the Accused Instrumentalities, which when used as designed and intended, constitute 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, Vembu uses the Accused Instrumentality to practice infringing methods for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support for the Accused Instrumentality to Vembu's customers.

106. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "A system comprising: a memory device." See, e.g., https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 4 ("Benefits • Significantly lower physical disk purchase costs due to massive reduction of storage requirements by as much as 90%. • Leverage existing assets better due to improved storage efficiency. For instance, you can store up to 10TB of data on an existing 1 TB HDD.").

107. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "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." See, e.g., https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

108. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "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". Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "compression technique" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). See, e.g.,

https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server … As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage. … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

109. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "said compressed data stream is stored on said memory device." See, e.g., https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server … As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage. … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

110. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form." *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Vembu Solution • Global, Variable Length Block Deduplication • 90% Reduction in Storage Requirements • 75% Faster Data Transmission over WAN … • 80% faster backups • 80% reduction in backup windows … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based

backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

111. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "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." *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5, 7, 10 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created. Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy … We use variable length block-based deduplication, which has been explained at length earlier in this whitepaper. But that's not all. With VembuFS we have facilitated a target based global de-duplication scheme.").

112. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '530 patent, for similar reasons as explained above with respect to Claim 1 of

the ‘530 patent.

113. On information and belief, all of the Accused Instrumentalities constitute the claimed systems in substantially the same way. *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 17-18 (“*Does deduplication work on Vembu FileShare (SyncBlaze)?* Vembu provides both Backup & Disaster recovery (BDR) as well as file sharing & collaboration offerings (Vembu FileShare), both of which leverage one unified and foundational infrastructure platform. … Our deduplication technology, implemented at an infrastructure level, will therefore be leveraged across all the associated usage scenarios for our Vembu FileShare solution whether it is deployed either as standalone offering or as part of a bundled offering with the Vembu BDR solution.”).

114. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the systems claimed by the ‘530 patent.

115. On information and belief, Vembu has had knowledge of the ‘530 patent since at least the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the ‘530 patent and knew of its infringement, including by way of this lawsuit.

116. Vembu’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 the ‘530 patent, knowing that when the Accused Instrumentalities are used in their ordinary and customary manner with such compatible systems, such systems are converted into infringing systems 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, thereby infringing the '530 patent. For example, Vembu instructs users of the Vembu BDR Suite about the advantages of its deduplication and compression features: "Vembu Solution • Global, Variable Length Block Deduplication • 90% Reduction in Storage Requirements • 75% Faster Data Transmission over WAN … • 80% faster backups • 80% reduction in backup windows … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations." See https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11. Thus, with knowledge of the '530 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '530 patent, knowing that such use constituted infringement of the '530 patent.

117. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '530 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '530 patent. Vembu 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, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '530 patent, knowing that such use constitutes infringement of the '530 patent.

118. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '530 patent pursuant to 35 U.S.C. § 271.

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

Vembu StoreGrid

120. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '530 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu StoreGrid, including but not limited to StoreGrid Cloud, StoreGrid Service Provider Edition (StoreGrid SP), StoreGrid Hosting Provider Edition, and StoreGrid Professional Edition (StoreGrid Pro), and all versions and variations thereof since the issuance of the '530 patent ("Accused Instrumentality").

121. On information and belief, Vembu has directly infringed and continues to infringe at least Claim 1 of the '530 patent, for example, through its own use, testing, sale, offer for sale, and/or importation of the Accused Instrumentalities and computer systems running the Accused Instrumentalities, which when used as designed and intended, constitute 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, Vembu uses the Accused Instrumentality to practice infringing methods for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support for the Accused Instrumentality to Vembu's customers.

122. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "A system comprising: a memory device." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Automatic incremental backup and compression that saves on disk space and bandwidth").

123. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "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." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center. StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup.").

124. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement "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". Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "compression technique" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining

disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

125. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "said compressed data stream is stored on said memory device." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks … The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

126. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk

space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center.").

127. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "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." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation."); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

128. On information and belief, Vembu also directly infringes and continues to infringe

other claims of the ‘530 patent, for similar reasons as explained above with respect to Claim 1 of the ‘530 patent.

129. On information and belief, all of the Accused Instrumentalities constitute the claimed systems in substantially the same way.

130. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the systems claimed by the ‘530 patent.

131. On information and belief, Vembu has had knowledge of the ‘530 patent since at least the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the ‘530 patent and knew of its infringement, including by way of this lawsuit.

132. Vembu’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 the ‘530 patent, knowing that when the Accused Instrumentalities are used in their ordinary and customary manner with such compatible systems, such systems are converted into infringing systems 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, thereby infringing the ‘530 patent. For example, Vembu instructs users of the Vembu StoreGrid about the advantages of its incremental backup and compression features. *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-

storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center."). Thus, with knowledge of the '530 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '530 patent, knowing that such use constituted infringement of the '530 patent.

133. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '530 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '530 patent. Vembu 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, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '530 patent, knowing that such use constitutes infringement of the '530 patent.

134. 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, Vembu has injured Realtime and is liable to Realtime for infringement of

the ‘530 patent pursuant to 35 U.S.C. § 271.

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

COUNT V

INFRINGEMENT OF U.S. PATENT NO. 8,643,513

136. Plaintiff realleges and incorporates by reference paragraphs 1-135 above, as if fully set forth herein.

137. Plaintiff Realtime is the owner by assignment of United States Patent No. 8,643,513 (“the ‘513 patent”) entitled “Data compression systems and methods.” The ‘513 patent was duly and legally issued by the United States Patent and Trademark Office on February 4, 2014. A true and correct copy of the ‘513 patent is included as Exhibit E.

Vembu BDR Suite

138. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the ‘513 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu’s compression products and services, such as, *e.g.,* Vembu BDR Suite, including but not limited to Vembu BDR Suite v3.5.0, and/or its subcomponents, whether released on a standalone basis or as bundled together in Vembu BDR Suite, including but not limited to Vembu VMBackup, Vembu ImageBackup, Vembu NetworkBackup, Vembu OnlineBackup, Vembu SaaSBackup, Vembu OffsiteDR, Vembu CloudDR, Vembu BDR360, and Vembu Universal Explorer, Vembu FileShare (SyncBlaze), and all versions and variations thereof since the issuance of the ‘513 patent (“Accused Instrumentality”).

139. On information and belief, Vembu has directly infringed and continues to infringe Claim 1 of the ‘513 patent, for example, through its own use and testing of the Accused Instrumentalities to practice compression methods claimed by the ‘513 patent, including a method

of compressing a plurality of data blocks, comprising: analyzing the plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks; applying the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion; analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the characteristic, attribute, or parameter is identified, wherein the analyzing the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied excludes analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and wherein the analyzing the data block to recognize the any characteristic, attribute, or parameter excludes analyzing based only on the descriptor. Upon information and belief, Vembu 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 for the Accused Instrumentality to Vembu's customers.

140. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "a method of compressing a plurality of data blocks, comprising: analyzing the plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks; applying the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion." *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10 ("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server. … As part of this inline processing, while the stream of

data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage.").

141. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the characteristic, attribute, or parameter is identified". Even if the deduplication function in the Accused Instrumentality were found to not literally meet the "analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the characteristic, attribute, or parameter is identified" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, deduplication performs substantially the same function (for example, reducing the overall amount of bits to store) in substantially the same way (by, for example, applying a technique based on the specific content of the incoming data in order to present for storage fewer overall bits) to achieve substantially the same result (for example, storage of fewer bits of data overall). *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 5-7 ("Data Deduplication, on the other hand, is based on the fundamental principle of identifying "chunks" (or certain number of blocks of bytes) of duplicate data within files or raw disk images and storing only one copy of that chunk for every future reference. If it so happens that a chunk of the same characteristics exists in another file (a good example being a higher version of the same file), the system will store only a "pointer" to the stored chunk and in turn, the duplicate chunk is deleted. The deduplication engine will thus basically detect identical blocks of data, remove the redundant data and insert pointer to existing data in its place whenever it comes across the same block … The chunk is basically

processed to create a unique hash, also referred to as a digital signature of that block of data being analyzed. There are many popular hash generation algorithms such as MD5 and SHA-1 which can be employed for this purpose. This "hash" is the key to the chunk and is stored in an index. When the deduplication engine analyses a chunk of new data, it will create the "hash" and have it compared to the existing ones in the index. If the software identifies it as a duplicate block, then it inserts a "pointer" to the original block of data in the system's metadata information. Now, if the same block is encountered multiple times, then an equal number of pointers will also be created. Thus, no duplicate data is ever stored and disk space is saved in the elimination of such redundancy.").

142. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "wherein the analyzing the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied excludes analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and wherein the analyzing the data block to recognize the any characteristic, attribute, or parameter excludes analyzing based only on the descriptor." *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10 ("As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage.").

143. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '513 patent, for similar reasons as explained above with respect to Claim 1 of the '513 patent.

144. On information and belief, all of the Accused Instrumentalities constitute the claimed systems in substantially the same way. *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 17-18 ("*Does deduplication work on Vembu FileShare (SyncBlaze)?* Vembu provides both Backup & Disaster recovery (BDR) as well as file sharing & collaboration offerings (Vembu FileShare), both of which leverage one unified and foundational infrastructure platform. … Our deduplication technology, implemented

at an infrastructure level, will therefore be leveraged across all the associated usage scenarios for our Vembu FileShare solution whether it is deployed either as standalone offering or as part of a bundled offering with the Vembu BDR solution.").

145. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the systems claimed by the '513 patent.

146. On information and belief, Vembu has had knowledge of the '513 patent since at least the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the '513 patent and knew of its infringement, including by way of this lawsuit.

147. Vembu's affirmative acts of making, using, selling, offering for sale, and/or importing the Accused Instrumentalities have induced and continue to induce end-users of the Accused Instrumentalities to use the Accused Instrumentalities in their normal and customary way to infringe the '513 patent by practicing compression methods claimed by the '513 patent, including a method of compressing a plurality of data blocks, comprising: analyzing the plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks; applying the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion; analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the characteristic, attribute, or parameter is identified, wherein the analyzing the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied excludes analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and wherein the analyzing the data block to recognize the any characteristic, attribute, or parameter excludes analyzing based only on the descriptor. For example, Vembu instructs users of the Vembu BDR Suite about the advantages of its deduplication and compression features: "Vembu Solution • Global, Variable Length Block Deduplication • 90% Reduction in

Storage Requirements • 75% Faster Data Transmission over WAN … • 80% faster backups • 80% reduction in backup windows … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations." See https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11. Thus, with knowledge of the '513 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '513 patent, knowing that such use constituted infringement of the '513 patent.

148. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '513 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '513 patent. Vembu performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '513 patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '513 patent, knowing that such use constitutes infringement of the '513 patent.

149. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '513 patent pursuant to 35 U.S.C. § 271.

150. As a result of Vembu's infringement of the '513 patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, together with interest and costs as fixed by the Court.

Vembu StoreGrid

151. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '513 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu StoreGrid, including but not limited to StoreGrid Cloud, StoreGrid Service Provider Edition (StoreGrid SP), StoreGrid Hosting Provider Edition, and StoreGrid Professional Edition (StoreGrid Pro), and all versions and variations thereof since the issuance of the '513 patent ("Accused Instrumentality").

152. On information and belief, Vembu has directly infringed and continues to infringe Claim 1 of the '513 patent, for example, through its own use and testing of the Accused Instrumentalities to practice compression methods claimed by the '513 patent, including a method of compressing a plurality of data blocks, comprising: analyzing the plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks; applying the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion; analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the characteristic, attribute, or parameter is identified, wherein the analyzing the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied excludes analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and wherein the analyzing the data block to recognize the any characteristic, attribute, or parameter excludes analyzing based only on the descriptor. Upon information and belief, Vembu 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 for the Accused Instrumentality to Vembu's customers.

153. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "a method of compressing a plurality of data blocks, comprising: analyzing the plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks; applying the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks … The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

154. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data

block when the characteristic, attribute, or parameter is identified". Even if the deduplication function in the Accused Instrumentality were found to not literally meet the "analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the characteristic, attribute, or parameter is identified" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, deduplication performs substantially the same function (for example, reducing the overall amount of bits to store) in substantially the same way (by, for example, applying a technique based on the specific content of the incoming data in order to present for storage fewer overall bits) to achieve substantially the same result (for example, storage of fewer bits of data overall). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation."); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block,

across all clients, is stored in a compressed format in the repository.").

155. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "wherein the analyzing the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied excludes analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and wherein the analyzing the data block to recognize the any characteristic, attribute, or parameter excludes analyzing based only on the descriptor." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. … StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks … The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

156. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '513 patent, for similar reasons as explained above with respect to Claim 1 of the '513 patent.

157. On information and belief, all of the Accused Instrumentalities constitute the

claimed systems in substantially the same way.

158. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the systems claimed by the ‘513 patent.

159. On information and belief, Vembu has had knowledge of the ‘513 patent since at least the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the ‘513 patent and knew of its infringement, including by way of this lawsuit.

160. Vembu’s affirmative acts of making, using, selling, offering for sale, and/or importing the Accused Instrumentalities have induced and continue to induce end-users of the Accused Instrumentalities to use the Accused Instrumentalities in their normal and customary way to infringe the ‘513 patent by practicing compression methods claimed by the ‘513 patent, including a method of compressing a plurality of data blocks, comprising: analyzing the plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks; applying the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion; analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the characteristic, attribute, or parameter is identified, wherein the analyzing the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied excludes analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and wherein the analyzing the data block to recognize the any characteristic, attribute, or parameter excludes analyzing based only on the descriptor. For example, Vembu instructs users of the Vembu StoreGrid about the advantages of its incremental backup and compression features. *See, e.g.,* http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ (“Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates

incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center."). Thus, with knowledge of the '513 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '513 patent, knowing that such use constituted infringement of the '513 patent.

161. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '513 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '513 patent. Vembu performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '513 patent and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. On information and belief, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '513 patent, knowing that such use constitutes infringement of the '513 patent.

162. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '513 patent pursuant to 35 U.S.C. § 271.

163. As a result of Vembu's infringement of the '513 patent, Plaintiff Realtime is

entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, together with interest and costs as fixed by the Court.

COUNT VI

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

164. Plaintiff Realtime realleges and incorporates by reference paragraphs 1-163 above, as if fully set forth herein.

165. 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. A true and correct copy of the '908 Patent is included as Exhibit F.

Vembu BDR Suite

166. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '908 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu BDR Suite, including but not limited to Vembu BDR Suite v3.5.0, and/or its subcomponents, whether released on a standalone basis or as bundled together in Vembu BDR Suite, including but not limited to Vembu VMBackup, Vembu ImageBackup, Vembu NetworkBackup, Vembu OnlineBackup, Vembu SaaSBackup, Vembu OffsiteDR, Vembu CloudDR, Vembu BDR360, and Vembu Universal Explorer, Vembu FileShare (SyncBlaze), and all versions and variations thereof since the issuance of the '908 patent ("Accused Instrumentality").

167. On information and belief, Vembu has directly infringed and continues to infringe the '908 patent, for example, through its own use, testing, sale, offer for sale, and/or importation of the Accused Instrumentalities and computer systems running the Accused Instrumentalities, which when used as designed and intended, constitute 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, thereby infringing the '908 Patent. Upon information and belief, Vembu uses the Accused Instrumentality to practice infringing methods for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support for the Accused Instrumentality to Vembu's customers.

168. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "a system comprising: a memory device". See, e.g., https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 4 ("Benefits • Significantly lower physical disk purchase costs due to massive reduction of storage requirements by as much as 90%. • Leverage existing assets better due to improved storage efficiency. For instance, you can store up to 10TB of data on an existing 1 TB HDD.").

169. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "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." Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "compression technique" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method

among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). See, e.g., https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server … As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage. … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

170. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "wherein the compressed first and second data blocks are stored on the memory device". See, e.g., https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Crucially, our data de-duplication system allows multiple streams of data ingested from different clients to be sent into a common shared pool of blocks and in this way, common blocks between files and datasets across clients can be deduplicated on a global basis. Only a single instance of a block from across all devices/users will be stored on the server … As part of this inline processing, while the stream of data blocks are being processed for deduplication, it is also compressed in parallel to ensure accumulative savings on storage. … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

171. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "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." *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11 ("Vembu Solution • Global, Variable Length Block Deduplication • 90% Reduction in Storage Requirements • 75% Faster Data Transmission over WAN … • 80% faster backups • 80% reduction in backup windows … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations.").

172. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '908 patent, for similar reasons as explained above with respect to Claim 1 of the '908 patent.

173. On information and belief, all of the Accused Instrumentalities constitute the claimed system in substantially the same way. *See, e.g.*, https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 17-18 ("*Does deduplication work on Vembu FileShare (SyncBlaze)?* Vembu provides both Backup & Disaster recovery (BDR) as well as file sharing & collaboration offerings (Vembu FileShare), both of which leverage one unified and foundational infrastructure platform. … Our deduplication technology, implemented at an infrastructure level, will therefore be leveraged across all the associated usage scenarios for our Vembu FileShare solution whether it is deployed either as standalone offering or as part of a bundled offering with the Vembu BDR solution.").

174. On information and belief, use of the Accused Instrumentality in its ordinary and customary fashion results in infringement of the methods claimed by the '908 patent.

175. On information and belief, Vembu has had knowledge of the '908 patent at least since the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the '908 patent and knew of its infringement, including by way of this lawsuit.

176. Vembu'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 the '908 patent, knowing that when the Accused Instrumentalities are used in their ordinary and customary manner with such compatible systems, such systems are converted into infringing systems 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, thereby infringing the '908 Patent. For example, Vembu instructs users of the Vembu BDR Suite about the advantages of its deduplication and compression features: "Vembu Solution • Global, Variable Length Block Deduplication • 90% Reduction in Storage Requirements • 75% Faster Data Transmission over WAN … • 80% faster backups • 80% reduction in backup windows … As a result, Vembu BDR with its hyperefficient de-duplication, compression, CBT based backup & recovery technologies dramatically reduces the amount of time and space required for both backup and restore operations." See https://www.vembu.com/labs/jayashree/VembuDeduplication.pdf at 10-11. Thus, with knowledge of the '908 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '908 patent, knowing that such use constituted infringement of the '908 patent.

177. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '908 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '908 patent. Vembu 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, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '908 patent, knowing that such use constitutes infringement of the '908 patent.

178. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '908 patent pursuant to 35 U.S.C. § 271.

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

Vembu StoreGrid

180. On information and belief, Vembu has made, used, offered for sale, sold and/or imported into the United States Vembu products that infringe the '908 patent, and continues to do so. By way of illustrative example, these infringing products include, without limitation, Vembu's compression products and services, such as, *e.g.*, Vembu StoreGrid, including but not limited to StoreGrid Cloud, StoreGrid Service Provider Edition (StoreGrid SP), StoreGrid Hosting Provider Edition, and StoreGrid Professional Edition (StoreGrid Pro), and all versions and variations thereof since the issuance of the '908 patent ("Accused Instrumentality").

181. On information and belief, Vembu has directly infringed and continues to infringe the '908 patent, for example, through its own use, testing, sale, offer for sale, and/or importation of the Accused Instrumentalities and computer systems running the Accused Instrumentalities, which when used as designed and intended, constitute 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, thereby infringing the '908 Patent. Upon information and belief, Vembu uses the Accused Instrumentality to practice infringing methods for its own internal non-testing business purposes, while testing the Accused Instrumentality, and while providing technical support for the Accused Instrumentality to Vembu's customers.

182. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "a system comprising: a memory device". *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Automatic incremental backup and compression that saves on disk space and bandwidth").

183. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "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." Even if the determination of whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality were found not to literally meet the "compression technique" limitation, this limitation is met under the doctrine of equivalents because it is insubstantially different from what the limitation literally requires. Moreover, determining whether particular data within a data block of an input data stream is duplicative of data that has been previously compressed and/or stored by the Accused Instrumentality performs substantially the same function (for example, to provide the Accused Instrumentality with some parameter of the data that can be used as a basis to select the optimal data compression method among multiple available data compression methods) in substantially the same way (by, for example, identifying some characteristic of the data, beyond a mere descriptor that is indicative of the data type of the data within the data block, that is relevant to selecting among multiple available

data compression methods) to achieve substantially the same result (for example, enabling the Accused Instrumentality to select the optimal data compression method from among multiple available data compression methods). *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center. StoreGrid's Disk Image Backup protects your Windows server systems by combining disk imaging technology and StoreGrid Block Tracking Technology to capture only the delta changes that has occurred on your system after the first full disk image backup."); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("Deduplication : It is the process of eliminating redundant data. StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks; the size of each block is determined smartly, using mathematical techniques such as Rabin-Chunk, to maximize the deduplication ratio. The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

184. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "wherein the compressed first and second data blocks are stored on the memory device". *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Powerful source-centric compression technologies are

pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); http://storegrid.vembu.com/online-backup/help/linux-installation-guide.html ("StoreGrid backs up the data sent by various clients and splits it into variable-sized blocks … The blocks are then sent to the Repository level Deduplication Module, which de-duplicates and compresses each block. This ensures that only one copy of a data block, across all clients, is stored in a compressed format in the repository.").

185. The Accused Instrumentality satisfies literally and/or under the doctrine of equivalents the claim requirement, "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." *See, e.g.*, http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders–identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time incremental to a hardware independent physical or virtual server either local or at remote data center.").

186. On information and belief, Vembu also directly infringes and continues to infringe other claims of the '908 patent, for similar reasons as explained above with respect to Claim 1 of the '908 patent.

187. On information and belief, all of the Accused Instrumentalities constitute the claimed system in substantially the same way.

188. On information and belief, use of the Accused Instrumentality in its ordinary and

customary fashion results in infringement of the methods claimed by the '908 patent.

189. On information and belief, Vembu has had knowledge of the '908 patent at least since the filing of this Complaint or shortly thereafter, and on information and belief, Vembu knew of the '908 patent and knew of its infringement, including by way of this lawsuit.

190. Vembu'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 the '908 patent, knowing that when the Accused Instrumentalities are used in their ordinary and customary manner with such compatible systems, such systems are converted into infringing systems 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, thereby infringing the '908 Patent. For example, Vembu instructs users of the Vembu StoreGrid about the advantages of its incremental backup and compression features. *See, e.g.,* http://www.backupreview.info/2012/10/23/review-vembu-storegrid-online-backup-solution/ ("Once configured the StoreGrid application repeatedly and intelligently checks the files/ folders– identified for the backup schedule–for changes and initiates incremental backup automatically, saving the user thousands of dollars by bandwidth conservation. … Powerful source-centric compression technologies are pressed into service to save bandwidth in data transmission and disk space in storage. … Automatic incremental backup and compression that saves on disk space and bandwidth"); https://www.vembu.com/blog/get-ready-to-test-drive-storegrids-disk-image-automerge/ ("StoreGrid's already existing Disk Imaging capabilities delivers continuous incremental backup of complete live systems to a local or remote online data center. In case any disaster strikes, restore remotely within minutes from any point-in-time

incremental to a hardware independent physical or virtual server either local or at remote data center."). Thus, with knowledge of the '908 patent gained from at least the filing and service of the original Complaint in this action, Vembu encouraged users of the Accused Instrumentalities to use their deduplication/compression functionality to infringe the '908 patent, knowing that such use constituted infringement of the '908 patent.

191. For similar reasons, Vembu also induces its customers to use the Accused Instrumentalities to infringe other claims of the '908 patent. Vembu specifically intended and was aware that these normal and customary activities would infringe the '908 patent. Vembu 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, Vembu engaged in such inducement to promote the sales of the Accused Instrumentalities. Accordingly, Vembu has induced and continues to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their ordinary and customary way to infringe the '908 patent, knowing that such use constitutes infringement of the '908 patent.

192. 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, Vembu has injured Realtime and is liable to Realtime for infringement of the '908 patent pursuant to 35 U.S.C. § 271.

193. As a result of Vembu's infringement of the '908 patent, Plaintiff Realtime is entitled to monetary damages in an amount adequate to compensate for Vembu's infringement, but in no event less than a reasonable royalty for the use made of the invention by Vembu, 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 Vembu has infringed, either literally and/or under the doctrine of equivalents, the '506 patent, the '728 patent, the '992 patent,

the ‘530 patent, the ‘513 patent, and the ‘908 patent;

b. A judgment and order requiring Vembu to pay Plaintiff its damages, costs, expenses, and prejudgment and post-judgment interest for its infringement of the ‘506 patent, the ‘728 patent, the ‘992 patent, the ‘530 patent, the ‘513 patent, and the ‘908 patent as provided under 35 U.S.C. § 284;

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

d. 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 Vembu; and

e. 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: July 22, 2016

Respectfully submitted,

/s/ Marc A. Fenster by permission Claire Henry

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