

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

VSTREAM TECHNOLOGIES, LLC,

Plaintiff,

v.

**PLR IP HOLDINGS LLC, PLR
ECOMMERCE LLC, PLR BRAND
SERVICES LLC; C&A IP HOLDINGS
LLC, C&A MARKETING INC., C&A
LICENSING LLC;**

**DRIFT INNOVATION INC., DRIFT
INNOVATION LTD.;**

AND CONTOUR LLC,

Defendants.

Civil Action No. 6:15-cv-974

***Consolidated with Civil Action Nos.
6:15-cv-976 and 6:15-cv-977***

**SECOND AMENDED COMPLAINT
FOR PATENT INFRINGEMENT
AGAINST DEFENDANTS
MOTOROLA MOBILITY LLC,
BLACKBERRY LTD., AND
BLACKBERRY CORP.**

VSTREAM TECHNOLOGIES, LLC

Plaintiff,

v.

**MOTOROLA MOBILITY LLC,
BLACKBERRY LTD.,
BLACKBERRY CORP.,**

Defendants.

VSTREAM TECHNOLOGIES, LLC,

Plaintiff,

v.

**RICOH IMAGING AMERICAS
CORPORATION, RICOH AMERICAS
CORPORATION, RICOH USA INC.,
RICOH IMAGING COMPANY LTD.,
AND RICOH COMPANY LTD.,**

Defendants.

PLAINTIFF’S SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff VStream Technologies, LLC (“Plaintiff” or “VStream”), by and through its undersigned counsel, files this Second Amended Complaint for Patent Infringement against Defendant Motorola Mobility LLC (“Motorola”), Defendant BlackBerry Limited (“BlackBerry Canada”), and Defendant BlackBerry Corporation (“BlackBerry USA,” together with Motorola and BlackBerry Canada, “Defendants”) as follows:

NATURE OF THE ACTION

1. This lawsuit pertains to the Defendants’ infringement of each of the following U.S. Patents: (1) U.S. Patent No. 6,690,731 titled “Method and Apparatus for Diagonal Processing of Video Data” (the “’731 Patent”); (2) U.S. Patent No. 8,179,971 titled “Method and Apparatus for Video Data Compression” (the “’971 Patent”); (3) U.S. Patent No. 6,850,647 titled “System, Method, and Article of Manufacture for Decompressing Digital Camera Sensor Data” (the “’647 Patent”); (4) U.S. Patent No. 7,627,183 titled “System, Method, and Article of Manufacture for Decompressing Digital Camera Sensor Data” (the “’183 Patent”); and (5) U.S. Patent No. 7,489,824 titled “System, Method, and Article of Manufacture for Decompressing Digital Camera Sensor Data” (the “’824 Patent”). Copies of the ’731, ’971, ’647, ’183, and ’824 Patents are attached to this Second Amended Complaint as Exhibits A through E, respectively. This Second Amended Complaint will refer to the patents asserted in this lawsuit collectively as the “Patents.”

PARTIES

2. Plaintiff VStream Technologies LLC is a Limited Liability Company organized under the laws of Texas. VStream is the assignee of all rights, title, and interest in and to the Patents and possesses all rights of recovery under the Patents.

3. On information and belief, Defendant Motorola is a Delaware limited liability company headquartered at 222 W. Merchandise Mart Plaza Chicago, Illinois 60654. On information and belief, Motorola is doing business in this judicial district, in Texas, and elsewhere throughout the United States. On information and belief, Defendant Motorola is a wholly-owned subsidiary of Lenovo Group Ltd. Motorola's products accused of infringement in this Second Amended Complaint are and have been offered for sale and sold in this and other judicial districts for a period not yet known but continuing to this date.

4. On information and belief, Defendant BlackBerry Canada is an Ontario company having its principal place of business at 295 Phillip Street, Waterloo, Ontario, Canada, N2L 3W8. On information and belief, BlackBerry Canada is doing business in this judicial district, in Texas, and elsewhere throughout the United States. BlackBerry Canada's products accused of infringement in this Second Amended Complaint are and have been offered for sale and sold in this and other judicial districts for a period not yet known but continuing to this date.

5. On information and belief, Defendant BlackBerry USA is a Delaware corporation with its principal place of business located at 5000 Riverside Drive, Irving, Texas 75039. On information and belief, BlackBerry USA is a wholly-owned subsidiary of BlackBerry Canada. On information and belief, BlackBerry Canada manufactures the products alleged to infringe in this Second Amended Complaint and/or controls the decisions of BlackBerry USA to infringe or license the Patents herein as agents of the principal parent corporation, BlackBerry Canada. On information and belief, BlackBerry USA is doing business in this judicial district, in Texas, and elsewhere throughout the United States. BlackBerry USA's products accused of infringement in this Second Amended Complaint are and have been offered for sale and sold in this and other judicial districts for a period not yet known but continuing to this date.

JURISDICTION AND VENUE

6. This action arises under the Patent Laws of the United States, 35 U.S.C. § 101 *et seq.*, including 35 U.S.C. § 271. This Court has original and exclusive subject matter jurisdiction over this case for patent infringement under 28 U.S.C. §§ 1331 and 1338(a).

7. The Court has personal jurisdiction over each Defendant. On information and belief, each Defendant has conducted and does conduct business within the State of Texas. On information and belief, each Defendant, directly and/or through intermediaries (including distributors, retailers, and others), offers for sale, sells, advertises, and/or uses its products and services (including the products accused of infringement in this lawsuit) in the United States, the State of Texas, and the Eastern District of Texas. On information and belief, each Defendant, directly and/or through intermediaries, has committed patent infringement within the State of Texas, and, more particularly, within the Eastern District of Texas. On information and belief, each Defendant, has purposefully and voluntarily placed one or more infringing products into the stream of commerce with the expectation that they will be purchased by consumers in the Eastern District of Texas. On information and belief, each Defendant is subject to general and/or specific jurisdiction in this Court.

8. Venue is proper in the Eastern District of Texas under 28 U.S.C. §§ 1391 and 1400(b).

9. Joinder of these Defendants in one action is proper under 35 U.S.C. § 299 because VStream is informed and believes that a substantial number of the products of each Defendant incorporate Qualcomm Snapdragon processors.

FACTUAL BACKGROUND

10. The Patents are generally directed to methods, systems, apparatus, and articles of manufacture for encoding and decoding signals representative of image and/or video signals (*i.e.*, “video compression” or “video decompression”).

11. Video compression and decompression techniques are used in many industries that involve either the transmission of images from one location to another and/or the manufacture or sale of devices to receive or store image and/or video signals. These industries include, for example: content providers; cable and satellite companies; teleconferencing providers; television, electronics and smartphone manufacturers; television broadcasters and digital media providers.

12. Video and/or image signals are encoded (compressed) prior to being stored on a medium or transmitted over a medium. The image or video signals are decoded (decompressed) when read from the storage medium or received at the other end of a transmission. The decoding will either recreate the original image and/or video signal in its entirety (“lossless” compression techniques) or will produce a close approximation of the original signal (“lossy” compression techniques). Compression and decompression techniques reduce the amount of data required to store, transmit, and reproduce image and/or video signals.

13. Michael Gough is the primary inventor of each of the Patents. He is a self-made man and prolific inventor. In 1978, at age seventeen, he began working on technology in the defense industry. He taught himself computer science and software technology. He became so adept that in 1987, he caught the attention of a young company in California—Apple. Gough began work at Apple in January 1988. Over his time at Apple, he was an inventor of fourteen patents assigned to Apple. Gough worked at Apple until December 1996.

14. On February 10, 2004, the U.S. Patent and Trademark Office (“USPTO”) issued the ’731 Patent to Michael L. Gough and James J. Gough. VStream is now the sole owner of the ’731 Patent and possesses all rights of recovery under the ’731 Patent.

15. On February 1, 2005, the USPTO issued the ’647 Patent to Michael L. Gough and Paul Miner. VStream is now the sole owner of the ’647 Patent and possesses all rights of recovery under the ’647 Patent.

16. On February 10, 2009, the USPTO issued the ’824 Patent to Michael L. Gough and Paul Miner. VStream is now the sole owner of the ’824 Patent and possesses all rights of recovery under the ’824 Patent.

17. On December 1, 2009, the USPTO issued the ’183 Patent to Michael L. Gough and Paul Miner. VStream is now the sole owner of the ’183 Patent and possesses all rights of recovery under the ’183 Patent.

18. On May 15, 2012, the USPTO issued the ’971 Patent to Michael L. Gough and James J. Gough. VStream is now the sole owner of the ’971 Patent and possesses all rights of recovery under the ’971 Patent.

FIRST CLAIM FOR RELIEF
(Infringement of U.S. Patent 6,690,731)

19. VStream refers to and incorporates the allegations of Paragraphs 1-18 above.

20. Motorola has infringed and continues to infringe claims 1, 4-8, and 20 of the ’731 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of manufacture claimed in the ’731 Patent, including but not limited to the Motorola Moto G4

Plus, Motorola Moto G4, Motorola Moto G4 Play, Motorola Droid Turbo 2, Motorola Droid Turbo, Motorola Droid Ultra, Motorola Droid Maxx, Motorola Droid Maxx 2, Motorola Droid Mini, Motorola Moto G Turbo Edition, Motorola Moto X, Motorola Moto X Force, Motorola Moto X Style, Motorola Moto X Play Dual SIM, Motorola Moto X Play, Motorola Moto X Pure Edition, Motorola Moto X (2nd gen), Motorola Moto G, Motorola Moto G Dual SIM (3rd gen), Motorola Moto G (3rd gen), Motorola Moto G 4G (2nd gen), Motorola Moto G 4G Dual SIM (2nd gen), Motorola Moto G Dual SIM (2nd gen), Motorola Moto G (2nd gen), Motorola Moto G 4G, Motorola Moto G Dual SIM, Motorola Moto E, Motorola Moto E Dual Sim, Motorola Moto E Dual SIM (2nd gen), Motorola Moto E (2nd gen), Motorola Moto E 4G LTE, Motorola Moto E 3G, Motorola Moto Maxx, Motorola Nexus 6, Motorola Luge, Motorola Droid RAZR MAXX HD, Motorola Droid RAZR HD, Motorola Droid RAZR M, Motorola RAZR M XT905, and Motorola Atrix HD smartphones.

21. For example, the Motorola products accused of infringement herein infringe claim 1 of the '731 patent because they separate diagonally arranged data from rectilinearly arranged data in a video stream; rotate said diagonally arranged data to a rectilinear position; and compress said rotated diagonally arranged data by a rectilinear compression algorithm. For example, the Motorola accused products contain Snapdragon processors, which are capable of diagonal processing and encoding of video signals. For example, Qualcomm Snapdragon processors are capable of perspective correction to correct distortion problems, which must include recognizing or identifying image data that requires correction, i.e. is in a non-rectilinear or diagonal arrangement. Snapdragon processors also have a Video Processing Engine (VPE) that performs pre-processing such as rotation, image stabilization and zoom, prior to compression. On information and belief, Motorola also uses third party software for video image stabilization,

certain techniques of which involve rotating diagonally arranged data to a rectilinear position. (See <http://www.morphoinc.com/news-en/morphos-software-moviesolid-featured-in-motorola-moto-x-style-with-4k-video-stabilization>.) The Motorola accused products support MPEG 4 and/or H.264 video compression/decompression, which are rectilinear compression algorithms.

22. On information and belief, Motorola has actively induced infringement of the '731 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, Motorola's customers use the products accused of infringement herein, and such use directly infringes the '731 Patent. At least as of the date of this lawsuit, Motorola has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by Motorola's customers. Motorola actively induces infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the Moto X Pure Edition instructs users how to use the phone's video camera to capture HD video, which uses the image stabilization functionality of Qualcomm Snapdragon processors. Similarly, Motorola's website advertises the "Video Stabilization" functions of its Moto Z Droid (<http://www.motorola.com/us/products/moto-z-droid-edition#advanced-camera>), Moto Z Force Droid (<http://www.motorola.com/us/products/moto-z-force-droid-edition>), Moto Z Play Droid (<http://www.motorola.com/us/products/moto-z-play>), Moto Droid Turbo 2 (<http://www.motorola.com/us/products/droid-turbo-2>), Moto G (<http://www.motorola.com/us/products/moto-g>), Moto G Plus (<http://www.motorola.com/us/products/moto-g-plus>), Moto X Pure Edition (<http://www.motorola.com/us/products/moto-x-pure-edition#top-rated-camera>), and Droid Maxx 2 (<http://www.motorola.com/us/products/droid-maxx-2>). In addition, the Moto Z Force

Droid, Moto Z Droid, Moto G Plus, Moto G (4th Generation), Moto G (3rd Generation), Moto G (2nd Generation), and Moto G (1st Generation) user manuals also instruct users to use the phone's "stabilizer" function to "Decrease shakiness when you're taking a video." Motorola's website also advertises the ability to capture video in MPEG4 and H.264 format for its Droid Maxx 2 (<http://www.motorola.com/us/products/droid-maxx-2>) smartphones. Motorola therefore infringes claims 1, 4-8, and 20 of the '731 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '731 Patent.

23. BlackBerry has infringed and continues to infringe claims 1, 4-8, and 20 of the '731 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of manufacture claimed in the '731 Patent, including but not limited to the BlackBerry DTEK50, BlackBerry Bold 9900, BlackBerry Bold 9930, BlackBerry Classic, BlackBerry Leap, BlackBerry Passport, BlackBerry Porsche Design P'9982, BlackBerry Porsche Design P'9983, BlackBerry Porsche Design P'9981, BlackBerry Priv, BlackBerry Q10, BlackBerry Q5, BlackBerry Torch 9850, BlackBerry Torch 9860, BlackBerry Z10, BlackBerry Z3, and BlackBerry Z30 smartphones.

24. For example, the BlackBerry products accused of infringement herein infringe claim 1 of the '731 patent because they separate diagonally arranged data from rectilinearly arranged data in a video stream; rotate said diagonally arranged data to a rectilinear position; and compress said rotated diagonally arranged data by a rectilinear compression algorithm. For example, the BlackBerry accused products contain Snapdragon processors, which are capable of diagonal processing and encoding of video signals. For example, Qualcomm Snapdragon

processors are capable of perspective correction to correct distortion problems, which must include recognizing or identifying image data that requires correction, i.e. is in a non-rectilinear or diagonal arrangement. Snapdragon processors also have a Video Processing Engine (VPE) that performs pre-processing such as rotation, image stabilization and zoom, prior to compression. In addition, BlackBerry's website advertises that BlackBerry products provide video stabilization, including "6DOF" stabilization, which on information and belief includes a rotational correction. The BlackBerry accused products support MPEG 4 and/or H.264 video compression/decompression, which are rectilinear compression algorithms.

25. On information and belief, BlackBerry has actively induced infringement of the '731 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, BlackBerry's customers use the products accused of infringement herein, and such use directly infringes the '731 Patent. At least as of the date of this lawsuit, BlackBerry has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by BlackBerry's customers. BlackBerry actively induces infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the BlackBerry Passport instructs users how to use the phone's video camera to capture HD video, which uses the image stabilization functionality of Qualcomm Snapdragon processors. In addition, BlackBerry's website advertises that the BlackBerry Priv provides a rear camera with "6DOF video stabilization combined with OIS for incredibly smooth video" and a front camera with "Image & video stabilization" (<http://us.blackberry.com/smartphones/priv-by-blackberry/specifications.html>), the BlackBerry Passport provides a rear camera with "6DOF video stabilization" and a front camera with

“Image and video stabilization” (<http://us.blackberry.com/smartphones/blackberry-passport/specifications.html>), the BlackBerry Classic provides a rear camera with “2DOF video stabilization” (<http://us.blackberry.com/smartphones/blackberry-classic/specifications.html>), the BlackBerry Leap provides a rear camera with “2DOF video stabilization” (<http://us.blackberry.com/smartphones/blackberry-leap/specifications.html>), and the BlackBerry DTEK50 provides a rear camera with “image stabilization” and a front camera with “Image & video stabilization” (<http://us.blackberry.com/smartphones/dtek50-by-blackberry/specifications.html>). The user guide for the BlackBerry Camera Version 2.0 application instructs users “To help reduce shakiness and keep your videos steady, turn on the Enhanced Video Stabilization switch” (<http://help.blackberry.com/en/camera/2.0/help/tom1441910051329.html>). The user guides for the BlackBerry Leap, BlackBerry Classic, BlackBerry Passport, BlackBerry Porsche Design P’9983, BlackBerry Z3, BlackBerry Porsche Design P’9982, BlackBerry Z30, BlackBerry Q5, BlackBerry Q10, and BlackBerry Z10 instruct users that “Video Stabilization is designed to reduce the effect of camera shake when you’re recording videos on your BlackBerry device. By default, this feature is turned on.” BlackBerry’s website further advertises that the BlackBerry Priv provides video encoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/priv-by-blackberry/specifications.html>), BlackBerry Classic provides video encoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-classic/specifications.html>), the BlackBerry DTEK50 provides video encoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/dtek50-by-blackberry/specifications.html>), and the BlackBerry Leap provides video encoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-leap/specifications.html>). BlackBerry

therefore infringes claims 1, 4-8, and 20 of the '731 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '731 Patent.

26. VStream is entitled to recover from each Defendant the damages sustained by VStream as a result of each Defendant's wrongful acts in an amount subject to proof at trial.

27. Each Defendant's infringement of the '731 Patent is causing, and will continue to cause, irreparable harm to VStream for which there is no adequate remedy at law unless and until enjoined by this Court.

SECOND CLAIM FOR RELIEF
(Infringement of U.S. Patent 8,179,971)

28. VStream refers to and incorporates the allegations of Paragraphs 1-27 above.

29. Motorola has infringed claims 1, 4-7, 19, 22-25, and 28 of the '971 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of manufacture claimed in the '971 Patent, including but not limited to the Motorola Moto G4 Plus, Motorola Moto G4, Motorola Moto G4 Play, Motorola Droid Turbo 2, Motorola Droid Turbo, Motorola Droid Ultra, Motorola Droid Maxx, Motorola Droid Maxx 2, Motorola Droid Mini, Motorola Moto G Turbo Edition, Motorola Moto X, Motorola Moto X Force, Motorola Moto X Style, Motorola Moto X Play Dual SIM, Motorola Moto X Play, Motorola Moto X Pure Edition, Motorola Moto X (2nd gen), Motorola Moto G, Motorola Moto G Dual SIM (3rd gen), Motorola Moto G (3rd gen), Motorola Moto G 4G (2nd gen), Motorola Moto G 4G Dual SIM (2nd gen), Motorola Moto G Dual SIM (2nd gen), Motorola Moto G (2nd gen), Motorola Moto G 4G, Motorola Moto G Dual SIM, Motorola Moto E, Motorola Moto E Dual Sim, Motorola Moto E

Dual SIM (2nd gen), Motorola Moto E (2nd gen), Motorola Moto E 4G LTE, Motorola Moto E 3G, Motorola Moto Maxx, Motorola Nexus 6, Motorola Luge, Motorola Droid RAZR MAXX HD, Motorola Droid RAZR HD, Motorola Droid RAZR M, Motorola RAZR M XT905, and Motorola Atrix HD smartphones.

30. For example, the Motorola products accused of infringement infringe claim 1 of the '971 patent because they employ a code segment rotating diagonally arranged video data to a rectilinear position when executing on a digital processing system; and a code segment compressing said rotated diagonally arranged data by a rectilinear compression algorithm when executing on a digital processing system. For example, the Motorola accused products contain Snapdragon processors, which include computer readable media including a code segment rotating diagonally arranged video data to a rectilinear position when executing on digital processing system. For example, Qualcomm Snapdragon processors are capable of perspective correction to correct distortion problems, which must include recognizing or identifying image data that requires correction, i.e. is in a non-rectilinear or diagonal arrangement. Snapdragon processors also have a Video Processing Engine (VPE) that performs pre-processing such as rotation, image stabilization and zoom, prior to compression. On information and belief, Motorola also uses third party software for video image stabilization, certain techniques of which involve rotating diagonally arranged data to a rectilinear position. (*See* <http://www.morphoinc.com/news-en/morphos-software-moviesolid-featured-in-motorola-moto-x-style-with-4k-video-stabilization>.) The Motorola accused products support MPEG 4 and/or H.264 video compression/decompression, which are rectilinear compression algorithms.

31. On information and belief, Motorola has actively induced infringement of the '971 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and

belief, Motorola's customers use the products accused of infringement herein, and such use directly infringes the '971 Patent. At least as of the date of this lawsuit, Motorola has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by Motorola's customers. Motorola has actively induced infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the Moto X Pure Edition instructs users how to use the phone's video camera to capture HD video, which uses the image stabilization functionality of Qualcomm Snapdragon processors. Similarly, Motorola's website advertises the "Video Stabilization" functions of its Moto Z Droid (<http://www.motorola.com/us/products/moto-z-droid-edition#advanced-camera>), Moto Z Force Droid (<http://www.motorola.com/us/products/moto-z-force-droid-edition>), Moto Z Play Droid (<http://www.motorola.com/us/products/moto-z-play>), Moto Droid Turbo 2 (<http://www.motorola.com/us/products/droid-turbo-2>), Moto G (<http://www.motorola.com/us/products/moto-g>), Moto G Plus (<http://www.motorola.com/us/products/moto-g-plus>), Moto X Pure Edition (<http://www.motorola.com/us/products/moto-x-pure-edition#top-rated-camera>), and Droid Maxx 2 (<http://www.motorola.com/us/products/droid-maxx-2>). The Moto Z Force Droid, Moto Z Droid, Moto G Plus, Moto G (4th Generation), Moto G (3rd Generation), Moto G (2nd Generation), and Moto G (1st Generation) user manuals also instructs users to use the phone's "stabilizer" function to "Decrease shakiness when you're taking a video." Motorola's website also advertises the ability to capture video in MPEG4 and H.264 format for its Droid Maxx 2 (<http://www.motorola.com/us/products/droid-maxx-2>) smartphones. Motorola has therefore

infringed claims 1, 4-7, 19, 22-25, and 28 of the '971 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '971 Patent.

32. BlackBerry has infringed claims 1, 4-7, 19, 22-25, and 28 of the '971 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of manufacture claimed in the '971 Patent, including but not limited to the BlackBerry DTEK50, BlackBerry Bold 9900, BlackBerry Bold 9930, BlackBerry Classic, BlackBerry Leap, BlackBerry Passport, BlackBerry Porsche Design P'9982, BlackBerry Porsche Design P'9983, BlackBerry Porsche Design P'9981, BlackBerry Priv, BlackBerry Q10, BlackBerry Q5, BlackBerry Torch 9850, BlackBerry Torch 9860, BlackBerry Z10, BlackBerry Z3, and BlackBerry Z30 smartphones.

33. For example, the BlackBerry products accused of infringement infringe claim 1 of the '971 patent because they employ a code segment rotating diagonally arranged video data to a rectilinear position when executing on a digital processing system; and a code segment compressing said rotated diagonally arranged data by a rectilinear compression algorithm when executing on a digital processing system. For example, the BlackBerry accused products contain Snapdragon processors, which include computer readable media including a code segment rotating diagonally arranged video data to a rectilinear position when executing on digital processing system. For example, Qualcomm Snapdragon processors are capable of perspective correction to correct distortion problems, which must include recognizing or identifying image data that requires correction, i.e. is in a non-rectilinear or diagonal arrangement. Snapdragon processors also have a Video Processing Engine (VPE) that performs pre-processing such as

rotation, image stabilization and zoom, prior to compression. In addition, BlackBerry's website advertises that BlackBerry products provide video stabilization, including "6DOF" stabilization, which on information and belief includes a rotational correction. The BlackBerry accused products support MPEG 4 and/or H.264 video compression/decompression, which are rectilinear compression algorithms.

34. On information and belief, BlackBerry has actively induced infringement of the '971 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, BlackBerry's customers use the products accused of infringement herein, and such use directly infringes the '971 Patent. At least as of the date of this lawsuit, BlackBerry has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by BlackBerry's customers. BlackBerry has actively induced infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the BlackBerry Passport instructs users how to use the phone's video camera to capture HD video, which uses the image stabilization functionality of Qualcomm Snapdragon processors. In addition, BlackBerry's website advertises that the BlackBerry Priv provides a rear camera with "6DOF video stabilization combined with OIS for incredibly smooth video" and a front camera with "Image & video stabilization" (<http://us.blackberry.com/smartphones/priv-by-blackberry/specifications.html>), the BlackBerry Passport provides a rear camera with "6DOF video stabilization" and a front camera with "Image and video stabilization" (<http://us.blackberry.com/smartphones/blackberry-passport/specifications.html>), the BlackBerry Classic provides a rear camera with "2DOF video stabilization" (<http://us.blackberry.com/smartphones/blackberry-classic/specifications.html>), the

BlackBerry Leap provides a rear camera with “2DOF video stabilization” (<http://us.blackberry.com/smartphones/blackberry-leap/specifications.html>), and the BlackBerry DTEK50 provides a rear camera with “image stabilization” and a front camera with “Image & video stabilization” (<http://us.blackberry.com/smartphones/dtek50-by-blackberry/specifications.html>). The user guide for the BlackBerry Camera Version 2.0 application instructs users “To help reduce shakiness and keep your videos steady, turn on the Enhanced Video Stabilization switch” (<http://help.blackberry.com/en/camera/2.0/help/tom1441910051329.html>). The user guides for the BlackBerry Leap, BlackBerry Classic, BlackBerry Passport, BlackBerry Porsche Design P’9983, BlackBerry Z3, BlackBerry Porsche Design P’9982, BlackBerry Z30, BlackBerry Q5, BlackBerry Q10, and BlackBerry Z10 instruct users that “Video Stabilization is designed to reduce the effect of camera shake when you’re recording videos on your BlackBerry device. By default, this feature is turned on.” BlackBerry’s website further advertises that the BlackBerry Priv provides video encoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/priv-by-blackberry/specifications.html>), BlackBerry Classic provides video encoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-classic/specifications.html>), the BlackBerry DTEK50 provides video encoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/dtek50-by-blackberry/specifications.html>), and the BlackBerry Leap provides video encoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-leap/specifications.html>). BlackBerry has therefore infringed claims 1, 4-7, 19, 22-25, and 28 of the ’971 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the ’971 Patent.

35. VStream is entitled to recover from each Defendant the damages sustained by VStream as a result of each Defendant's wrongful acts in an amount subject to proof at trial.

THIRD CLAIM FOR RELIEF
(Infringement of U.S. Patent 6,850,647)

36. VStream refers to and incorporates the allegations of Paragraphs 1-35 above.

37. Motorola has infringed and continues to infringe claims 1 and 8 of the '647 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of manufacture claimed in the '647 Patent, including but not limited to the Motorola Moto G4 Plus, Motorola Moto G4, Motorola Moto G4 Play, Motorola Droid Turbo 2, Motorola Droid Turbo, Motorola Droid Ultra, Motorola Droid Maxx, Motorola Droid Maxx 2, Motorola Droid Mini, Motorola Moto G Turbo Edition, Motorola Moto X, Motorola Moto X Force, Motorola Moto X Style, Motorola Moto X Play Dual SIM, Motorola Moto X Play, Motorola Moto X Pure Edition, Motorola Moto X (2nd gen), Motorola Moto G, Motorola Moto G Dual SIM (3rd gen), Motorola Moto G (3rd gen), Motorola Moto G 4G (2nd gen), Motorola Moto G 4G Dual SIM (2nd gen), Motorola Moto G Dual SIM (2nd gen), Motorola Moto G (2nd gen), Motorola Moto G 4G, Motorola Moto G Dual SIM, Motorola Moto E, Motorola Moto E Dual Sim, Motorola Moto E Dual SIM (2nd gen), Motorola Moto E (2nd gen), Motorola Moto E 4G LTE, Motorola Moto E 3G, Motorola Moto Maxx, Motorola Nexus 6, Motorola Luge, Motorola Droid RAZR MAXX HD, Motorola Droid RAZR HD, Motorola Droid RAZR M, Motorola RAZR M XT905, and Motorola Atrix HD smartphones.

38. For example, the Motorola products accused of infringement infringe claim 1 of the '647 patent because they obtain a plurality of bits of compressed input data from a bit stream; execute a first AC decoding operation based on the obtained plurality of bits of compressed input data in order to generate first output data as a recommendation; emit the first output data if it is determined that the recommendation should be accepted; and execute a second AC decoding operation in order to generate second output data if it is determined the recommendation should not be accepted. For example, the Motorola accused products support video playback using Main and High Profile H.264. In applying H.264 Main or High Profile decoding, the accused Motorola products obtain a plurality of bits of compressed input data from a bit stream. According to the H.264 standard document, Section 9.3, CABAC parsing process for slice data, a plurality of bits of compressed input data is input into an arithmetic decoder. CABAC parsing involves a first decoding operation based on the obtained plurality of bits of compressed input data in order to generate first output data as a recommendation, where the first output data $(b_0, \dots, b_{\text{binIdx}})$ is the result of one or more DecodeBin operations. CABAC parsing also involves emitting the first output data if it is determined that the recommendation should be accepted. If first output data $(b_0, \dots, b_{\text{binIdx}})$ is in the Binarization syntax element, then the recommendation is accepted. If the recommendation is accepted, then the output data syntax element equal to the value $(b_0 \dots b_{\text{binIdx}})$ is emitted. CABAC parsing also involves executing a second AC decoding operation in order to generate second output data if it is determined the recommendation should not be accepted. If initial $(b_0, \dots, b_{\text{binIdx}})$ value is not in the Binarization syntax element, then the process returns to the Execute DecodeBin(ctxIdx) (a second decoding operation) and the step iterates until $(b_0, \dots, b_{\text{binIdx}})$ is in Binarization syntax element, generating second output data $SE = \text{value}(b_0 \dots b_{\text{binIdx}})$.

39. On information and belief, Motorola has actively induced infringement of the '647 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, Motorola's customers use the products accused of infringement herein, and such use directly infringes the '647 Patent. At least as of the date of this lawsuit, Motorola has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by Motorola's customers. Motorola actively induces infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the Moto X Pure Edition instructs users how to play HD video files on the smartphone screen. Motorola further advertises that the accused products use Qualcomm Snapdragon processors, which record video in H.264/MPEG-4 AVC format, the decompression of which by certain techniques infringes the '647 Patent. Motorola's website further advertises that the Droid Turbo smartphone provides H.264, H.265, and MPEG-4 video playback (<http://www.motorola.com/us/products/droid-turbo>) and the user guides for its Moto Z Force Droid, Moto Z Droid, Moto G Plus, Moto G, Moto X Pure Edition, Droid Turbo 2, Droid Maxx 2, Moto X (2nd Generation), Moto X (1st Generation) smartphones instruct users how to play back video on the phones, including video encoded in H.264 and/or MPEG-4 format. On information and belief, the H.264 and MPEG-4 decoding in the accused products implements CABAC. Motorola therefore infringes claims 1 and 8 of the '647 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '647 Patent.

40. BlackBerry has infringed and continues to infringe claims 1 and 8 of the '647 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including

without limitation smartphones that implement the systems, methods, apparatus, and/or articles of manufacture claimed in the '647 Patent, including but not limited to the BlackBerry DTEK50, BlackBerry Bold 9900, BlackBerry Bold 9930, BlackBerry Classic, BlackBerry Leap, BlackBerry Passport, BlackBerry Porsche Design P'9982, BlackBerry Porsche Design P'9983, BlackBerry Porsche Design P'9981, BlackBerry Priv, BlackBerry Q10, BlackBerry Q5, BlackBerry Torch 9850, BlackBerry Torch 9860, BlackBerry Z10, BlackBerry Z3, and BlackBerry Z30 smartphones.

41. For example, the BlackBerry products accused of infringement infringe claim 1 of the '647 patent because they obtain a plurality of bits of compressed input data from a bit stream; execute a first AC decoding operation based on the obtained plurality of bits of compressed input data in order to generate first output data as a recommendation; emit the first output data if it is determined that the recommendation should be accepted; and execute a second AC decoding operation in order to generate second output data if it is determined the recommendation should not be accepted. For example, the BlackBerry accused products support video playback using Main and High Profile H.264. In applying H.264 Main or High Profile decoding, the accused BlackBerry products obtain a plurality of bits of compressed input data from a bit stream. According to the H.264 standard document, Section 9.3, CABAC parsing process for slice data, a plurality of bits of compressed input data is input into an arithmetic decoder. CABAC parsing involves a first decoding operation based on the obtained plurality of bits of compressed input data in order to generate first output data as a recommendation, where the first output data ($b_0, \dots, b_{\text{binIdx}}$) is the result of one or more DecodeBin operations. CABAC parsing also involves emitting the first output data if it is determined that the recommendation should be accepted. If first output data ($b_0, \dots, b_{\text{binIdx}}$) is in the Binarization syntax element, then the recommendation is

accepted. If the recommendation is accepted, then the output data syntax element equal to the value $(b_0 \dots b_{\text{binIdx}})$ is emitted. CABAC parsing also involves executing a second AC decoding operation in order to generate second output data if it is determined the recommendation should not be accepted. If initial $(b_0, \dots, b_{\text{binIdx}})$ value is not in the Binarization syntax element, then the process returns to the Execute DecodeBin(ctxIdx) (a second decoding operation) and the step iterates until $(b_0, \dots, b_{\text{binIdx}})$ is in Binarization syntax element, generating second output data SE = value $(b_0 \dots b_{\text{binIdx}})$.

42. On information and belief, BlackBerry has actively induced infringement of the '647 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, BlackBerry's customers use the products accused of infringement herein, and such use directly infringes the '647 Patent. At least as of the date of this lawsuit, BlackBerry has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by BlackBerry's customers. BlackBerry actively induces infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the BlackBerry Passport instructs users how to play HD video files on the smartphone screen. BlackBerry further advertises that the accused products use Qualcomm Snapdragon processors, which record video in H.264/MPEG-4 AVC format, the decompression of which by certain techniques infringes the '647 Patent. BlackBerry's website further advertises that the BlackBerry Priv provides video decoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/priv-by-blackberry/specifications.html>), BlackBerry Classic provides video decoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-classic/specifications.html>), the BlackBerry DTEK50 provides video decoding in MPEG-4,

H.264, and H.265 (<http://us.blackberry.com/smartphones/dtek50-by-blackberry/specifications.html>), the BlackBerry Leap provides video decoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-leap/specifications.html>), the BlackBerry Z3 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-z3/10.3.2/help/mba1344953159594.html>), the BlackBerry Porsche Design P'9982 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/p9982-from-blackberry/current/help/mba1344953159594.html>), the BlackBerry Porsche Design P'9983 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/p9983-from-blackberry/current/help/mba1344953159594.html>), the BlackBerry Z30 provides decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-z30/current/help/mba1344953159594.html>), the BlackBerry Q5 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-q5/current/help/mba1344953159594.html>), the BlackBerry Q10 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-q10/current/help/mba1344953159594.html>), and the BlackBerry Z10 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-z10/current/help/mba1344953159594.html>). User manuals for the BlackBerry Leap, BlackBerry Classic, BlackBerry Passport, BlackBerry Porsche Design P'9983, BlackBerry Porsche Design P'9982, BlackBerry Z3, BlackBerry Z30, BlackBerry Q5, BlackBerry Q10, and BlackBerry Z10 instruct users how to play videos on the smartphones, including videos in H.264 and MPEG-4 format. User manuals for the BlackBerry Porsche Design P'9981, BlackBerry Bold 9900/9930, and BlackBerry Torch 9850/9860, advertise that these smartphones decode video using H.264 and/or MPEG-4, and instruct users how to play video

files, including files in H.264 and/or MPEG-4 format. On information and belief, the H.265, H.264 and MPEG-4 decoding in the accused products implements CABAC. BlackBerry therefore infringes claims 1 and 8 of the '647 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '647 Patent.

43. VStream is entitled to recover from each Defendant the damages sustained by VStream as a result of each Defendant's wrongful acts in an amount subject to proof at trial.

44. Each Defendant's infringement of the '647 Patent is causing, and will continue to cause, irreparable harm to VStream for which there is no adequate remedy at law unless and until enjoined by this Court.

FOURTH CLAIM FOR RELIEF
(Infringement of U.S. Patent 7,627,183)

45. VStream refers to and incorporates the allegations of Paragraphs 1-44 above.

46. Motorola has infringed and continues to infringe claims 1-8 of the '183 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of manufacture claimed in the '183 Patent, including but not limited to the Motorola Moto G4 Plus, Motorola Moto G4, Motorola Moto G4 Play, Motorola Droid Turbo 2, Motorola Droid Turbo, Motorola Droid Ultra, Motorola Droid Maxx, Motorola Droid Maxx 2, Motorola Droid Mini, Motorola Moto G Turbo Edition, Motorola Moto X, Motorola Moto X Force, Motorola Moto X Style, Motorola Moto X Play Dual SIM, Motorola Moto X Play, Motorola Moto X Pure Edition, Motorola Moto X (2nd gen), Motorola Moto G, Motorola Moto G Dual SIM (3rd gen), Motorola Moto G (3rd gen), Motorola Moto G 4G (2nd gen), Motorola Moto G 4G Dual SIM (2nd gen),

Motorola Moto G Dual SIM (2nd gen), Motorola Moto G (2nd gen), Motorola Moto G 4G, Motorola Moto G Dual SIM, Motorola Moto E, Motorola Moto E Dual Sim, Motorola Moto E Dual SIM (2nd gen), Motorola Moto E (2nd gen), Motorola Moto E 4G LTE, Motorola Moto E 3G, Motorola Moto Maxx, Motorola Nexus 6, Motorola Luge, Motorola Droid RAZR MAXX HD, Motorola Droid RAZR HD, Motorola Droid RAZR M, Motorola RAZR M XT905, and Motorola Atrix HD smartphones.

47. For example, the Motorola products accused of infringement infringe claim 1 of the '183 patent because they employ a processor having at least two pipelines that obtains a plurality of raw data bits from a compressed video data stream; extracts one or more components from said plurality of raw data bits by analyzing said plurality of raw data bits in a look-up table; and directs each component into one of the pipelines for processing purposes based on the analysis. For example, the accused Motorola products contain Qualcomm Snapdragon processors which, on information and belief, uses multi-threading, pipelining, and parallel processing. The accused Motorola products also support bit parsing operations such as Context Adaptive Binary Arithmetic Coding (CABAC) which involves the extraction of one or more components from the raw data bits by analyzing the plurality of raw data bits and requires the use of look-up tables for performing arithmetic decoding. On information and belief, each component is directed into one of the pipelines based on the analysis.

48. On information and belief, Motorola has actively induced infringement of the '183 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, Motorola's customers use the products accused of infringement herein, and such use directly infringes the '183 Patent. At least as of the date of this lawsuit, Motorola has knowledge of the Patents and, on information and belief, has knowledge of actual infringement

of the Patents by Motorola's customers. Motorola actively induces infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the Moto X Pure Edition instructs users how to play HD video files on the smartphone screen. Motorola further advertises that the accused products use Qualcomm Snapdragon processors, which record video in H.264/MPEG-4 AVC format, the decompression of which by certain techniques infringes the '183 Patent. Motorola's website further advertises that the Droid Turbo smartphone provides H.264, H.265, and MPEG-4 video playback (<http://www.motorola.com/us/products/droid-turbo>) and the user guides for its Moto Z Force Droid, Moto Z Droid, Moto G Plus, Moto G, Moto X Pure Edition, Droid Turbo 2, Droid Maxx 2, Moto X (2nd Generation), Moto X (1st Generation) smartphones instruct users how to play back video on the phones, including video encoded in H.264 and/or MPEG-4 format. On information and belief, the H.264 and MPEG-4 decoding in the accused products implements CABAC. Motorola therefore infringes claims 1-8 of the '183 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '183 Patent.

49. BlackBerry has infringed and continues to infringe claims 1-8 of the '183 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of manufacture claimed in the '183 Patent, including but not limited to the BlackBerry DTEK50, BlackBerry Bold 9900, BlackBerry Bold 9930, BlackBerry Classic, BlackBerry Leap, BlackBerry Passport, BlackBerry Porsche Design P'9982, BlackBerry Porsche Design P'9983, BlackBerry Porsche Design P'9981, BlackBerry Priv, BlackBerry Q10, BlackBerry Q5,

BlackBerry Torch 9850, BlackBerry Torch 9860, BlackBerry Z10, BlackBerry Z3, and BlackBerry Z30 smartphones.

50. For example, the BlackBerry products accused of infringement infringe claim 1 of the '183 patent because they employ a processor having at least two pipelines that obtains a plurality of raw data bits from a compressed video data stream; extracts one or more components from said plurality of raw data bits by analyzing said plurality of raw data bits in a look-up table; and directs each component into one of the pipelines for processing purposes based on the analysis. For example, the accused BlackBerry products contain Qualcomm Snapdragon processors which, on information and belief, uses multi-threading, pipelining, and parallel processing. The accused BlackBerry products also support bit parsing operations such as Context Adaptive Binary Arithmetic Coding (CABAC) which involves the extraction of one or more components from the raw data bits by analyzing the plurality of raw data bits and requires the use of look-up tables for performing arithmetic decoding. On information and belief, each component is directed into one of the pipelines based on the analysis.

51. On information and belief, BlackBerry has actively induced infringement of the '183 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, BlackBerry's customers use the products accused of infringement herein, and such use directly infringes the '183 Patent. At least as of the date of this lawsuit, BlackBerry has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by BlackBerry's customers. BlackBerry actively induces infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the BlackBerry Passport instructs users how to play HD video files on the

smartphone screen. BlackBerry further advertises that the accused products use Qualcomm Snapdragon processors, which record video in H.264/MPEG-4 AVC format, the decompression of which by certain techniques infringes the '183 Patent. BlackBerry's website further advertises that the BlackBerry Priv provides video decoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/priv-by-blackberry/specifications.html>), BlackBerry Classic provides video decoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-classic/specifications.html>), the BlackBerry DTEK50 provides video decoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/dtek50-by-blackberry/specifications.html>), the BlackBerry Leap provides video decoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-leap/specifications.html>), the BlackBerry Z3 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-z3/10.3.2/help/mba1344953159594.html>), the BlackBerry Porsche Design P'9982 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/p9982-from-blackberry/current/help/mba1344953159594.html>), the BlackBerry Porsche Design P'9983 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/p9983-from-blackberry/current/help/mba1344953159594.html>), the BlackBerry Z30 provides decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-z30/current/help/mba1344953159594.html>), the BlackBerry Q5 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-q5/current/help/mba1344953159594.html>), the BlackBerry Q10 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-q10/current/help/mba1344953159594.html>), and the BlackBerry Z10 provides video decoding in H.264 and MPEG-4 ([28](http://help.blackberry.com/en/blackberry-</p></div><div data-bbox=)

z10/current/help/mba1344953159594.html). User manuals for the BlackBerry Leap, BlackBerry Classic, BlackBerry Passport, BlackBerry Porsche Design P'9983, BlackBerry Porsche Design P'9982, BlackBerry Z3, BlackBerry Z30, BlackBerry Q5, BlackBerry Q10, and BlackBerry Z10 instruct users how to play videos on the smartphones, including videos in H.264 and MPEG-4 format. User manuals for the BlackBerry Porsche Design P'9981, BlackBerry Bold 9900/9930, and BlackBerry Torch 9850/9860, advertise that these smartphones decode video using H.264 and/or MPEG-4, and instruct users how to play video files, including files in H.264 and/or MPEG-4 format. On information and belief, the H.265, H.264 and MPEG-4 decoding in the accused products implements CABAC. BlackBerry therefore infringes claims 1-8 of the '183 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '183 Patent.

52. VStream is entitled to recover from each Defendant the damages sustained by VStream as a result of each Defendant's wrongful acts in an amount subject to proof at trial.

53. Each Defendant's infringement of the '183 Patent is causing, and will continue to cause, irreparable harm to VStream for which there is no adequate remedy at law unless and until enjoined by this Court.

FIFTH CLAIM FOR RELIEF
(Infringement of U.S. Patent 7,489,824)

54. VStream refers to and incorporates the allegations of Paragraphs 1-53 above.

55. Motorola has infringed and continues to infringe claims 1-3 of the '824 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of

manufacture claimed in the '824 Patent, including but not limited to the Motorola Moto G4 Plus, Motorola Moto G4, Motorola Moto G4 Play, Motorola Droid Turbo 2, Motorola Droid Turbo, Motorola Droid Ultra, Motorola Droid Maxx, Motorola Droid Maxx 2, Motorola Droid Mini, Motorola Moto G Turbo Edition, Motorola Moto X, Motorola Moto X Force, Motorola Moto X Style, Motorola Moto X Play Dual SIM, Motorola Moto X Play, Motorola Moto X Pure Edition, Motorola Moto X (2nd gen), Motorola Moto G, Motorola Moto G Dual SIM (3rd gen), Motorola Moto G (3rd gen), Motorola Moto G 4G (2nd gen), Motorola Moto G 4G Dual SIM (2nd gen), Motorola Moto G Dual SIM (2nd gen), Motorola Moto G (2nd gen), Motorola Moto G 4G, Motorola Moto G Dual SIM, Motorola Moto E, Motorola Moto E Dual Sim, Motorola Moto E Dual SIM (2nd gen), Motorola Moto E (2nd gen), Motorola Moto E 4G LTE, Motorola Moto E 3G, Motorola Moto Maxx, Motorola Nexus 6, Motorola Luge, Motorola Droid RAZR MAXX HD, Motorola Droid RAZR HD, Motorola Droid RAZR M, Motorola RAZR M XT905, and Motorola Atrix HD smartphones.

56. For example, the Motorola products accused of infringement infringe claim 1 of the '824 patent because they obtain encoded video data; execute a first decoding operation on at least a portion of said encoded video data in order to generate first decoded data; determine whether the first decoding operation was sufficiently correct; execute a second decoding operation on said at least portion of said encoded video data which is slower than said first decoding operation in order to generate second decoded data if said first decoding operation was not sufficiently correct; and use said first decoded data if it is determined that said first decoding operation was sufficiently correct and said second decoded data if it is determined that said first decoding operation was not sufficiently correct. For example, the Motorola accused products support video playback using Main and High Profile H.264. In applying H.264 Main or High

Profile decoding, the accused Motorola products obtain a plurality of bits of compressed input data from a bit stream. According to the H.264 standard document, Section 9.3, CABAC parsing process for slice data, a plurality of bits of compressed input data is input into an arithmetic decoder. CABAC parsing involves executing a first decoding operation on at least a portion of said encoded video data in order to generate first decoded data, where the first decoded data $(b_0, \dots, b_{\text{binIdx}})$ is the result of one or more DecodeBin operations. CABAC parsing also involves determining whether the first decoding operation was sufficiently correct. For example, if $(b_0, \dots, b_{\text{binIdx}})$ is in the Binarization syntax element, then the first decoding operation was sufficiently correct. If the first decoding operation was sufficiently correct, then the output data syntax element equal to the value $(b_0 \dots b_{\text{binIdx}})$ is emitted. CABAC parsing also involves executing a second decoding operation on said at least portion of said encoded video data which is slower than said first decoding operation in order to generate second decoded data if said first decoding operation was not sufficiently correct. For example, if initial $(b_0, \dots, b_{\text{binIdx}})$ value is not in the Binarization syntax element, then the process returns to the Execute DecodeBin(ctxIdx) (a second decoding operation) and the step iterates until $(b_0, \dots, b_{\text{binIdx}})$ is in Binarization syntax element, generating second output data $SE = \text{value}(b_0 \dots b_{\text{binIdx}})$. The result of the second decoding operation takes longer than the result of the first decoding operation, due to the further one or more iterations of the decoding process in the case where the initial $(b_0, \dots, b_{\text{binIdx}})$ value is not in the Binarization syntax element. Further iterations require extra processing steps which increase the time taken to carry out decoding. CABAC parsing therefore involves using said first decoded data if it is determined that said first decoding operation was sufficiently correct and said second decoded data if it is determined that said first decoding operation was not sufficiently correct.

57. On information and belief, Motorola has actively induced infringement of the '824 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, Motorola's customers use the products accused of infringement herein, and such use directly infringes the '824 Patent. At least as of the date of this lawsuit, Motorola has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by Motorola's customers. Motorola actively induces infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the user guide for the Moto X Pure Edition instructs users how to play HD video files on the smartphone screen. Motorola further advertises that the accused products use Qualcomm Snapdragon processors, which record video in H.264/MPEG-4 AVC format, the decompression of which by certain techniques infringes the '824 Patent. Motorola's website further advertises that the Droid Turbo smartphone provides H.264, H.265, and MPEG-4 video playback (<http://www.motorola.com/us/products/droid-turbo>) and the user guides for its Moto Z Force Droid, Moto Z Droid, Moto G Plus, Moto G, Moto X Pure Edition, Droid Turbo 2, Droid Maxx 2, Moto X (2nd Generation), Moto X (1st Generation) smartphones instruct users how to play back video on the phones, including video encoded in H.264 and/or MPEG-4 format. On information and belief, the H.264 and MPEG-4 decoding in the accused products implements CABAC. Motorola therefore infringes claims 1-3 of the '824 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '824 Patent.

58. BlackBerry has infringed and continues to infringe claims 1-3 of the '824 Patent, either literally or through equivalents in violation of 35 U.S.C. § 271(a) by manufacturing, using, selling, offering to sell, and/or marketing several types of consumer electronics, including without limitation smartphones that implement the systems, methods, apparatus, and/or articles of

manufacture claimed in the '824 Patent, including but not limited to the BlackBerry DTEK50, BlackBerry Bold 9900, BlackBerry Bold 9930, BlackBerry Classic, BlackBerry Leap, BlackBerry Passport, BlackBerry Porsche Design P'9982, BlackBerry Porsche Design P'9983, BlackBerry Porsche Design P'9981, BlackBerry Priv, BlackBerry Q10, BlackBerry Q5, BlackBerry Torch 9850, BlackBerry Torch 9860, BlackBerry Z10, BlackBerry Z3, and BlackBerry Z30 smartphones.

59. For example, the BlackBerry products accused of infringement infringe claim 1 of the '824 patent because they obtain encoded video data; execute a first decoding operation on at least a portion of said encoded video data in order to generate first decoded data; determine whether the first decoding operation was sufficiently correct; execute a second decoding operation on said at least portion of said encoded video data which is slower than said first decoding operation in order to generate second decoded data if said first decoding operation was not sufficiently correct; and use said first decoded data if it is determined that said first decoding operation was sufficiently correct and said second decoded data if it is determined that said first decoding operation was not sufficiently correct. For example, the BlackBerry accused products support video playback using Main and High Profile H.264. In applying H.264 Main or High Profile decoding, the accused BlackBerry products obtain a plurality of bits of compressed input data from a bit stream. According to the H.264 standard document, Section 9.3, CABAC parsing process for slice data, a plurality of bits of compressed input data is input into an arithmetic decoder. CABAC parsing involves executing a first decoding operation on at least a portion of said encoded video data in order to generate first decoded data, where the first decoded data ($b_0, \dots, b_{\text{binIdx}}$) is the result of one or more DecodeBin operations. CABAC parsing also involves determining whether the first decoding operation was sufficiently correct. For example, if

$(b_0, \dots, b_{\text{binIdx}})$ is in the Binarization syntax element, then the first decoding operation was sufficiently correct. If the first decoding operation was sufficiently correct, then the output data syntax element equal to the value $(b_0 \dots b_{\text{binIdx}})$ is emitted. CABAC parsing also involves executing a second decoding operation on said at least portion of said encoded video data which is slower than said first decoding operation in order to generate second decoded data if said first decoding operation was not sufficiently correct. For example, if initial $(b_0, \dots, b_{\text{binIdx}})$ value is not in the Binarization syntax element, then the process returns to the Execute DecodeBin(ctxIdx) (a second decoding operation) and the step iterates until $(b_0, \dots, b_{\text{binIdx}})$ is in Binarization syntax element, generating second output data $SE = \text{value}(b_0 \dots b_{\text{binIdx}})$. The result of the second decoding operation takes longer than the result of the first decoding operation, due to the further one or more iterations of the decoding process in the case where the initial $(b_0, \dots, b_{\text{binIdx}})$ value is not in the Binarization syntax element. Further iterations require extra processing steps which increase the time taken to carry out decoding. CABAC parsing therefore involves using said first decoded data if it is determined that said first decoding operation was sufficiently correct and said second decoded data if it is determined that said first decoding operation was not sufficiently correct.

60. On information and belief, BlackBerry has actively induced infringement of the '824 patent and is liable as an infringer under 35 U.S.C. § 271(b). On information and belief, BlackBerry's customers use the products accused of infringement herein, and such use directly infringes the '824 Patent. At least as of the date of this lawsuit, BlackBerry has knowledge of the Patents and, on information and belief, has knowledge of actual infringement of the Patents by BlackBerry's customers. BlackBerry actively induces infringement by advertising the use of the accused products in an infringing manner and instructing its customers to use the accused products in an infringing manner. For example, and without limitation, the

user guide for the BlackBerry Passport instructs users how to play HD video files on the smartphone screen. BlackBerry further advertises that the accused products use Qualcomm Snapdragon processors, which record video in H.264/MPEG-4 AVC format, the decompression of which by certain techniques infringes the '824 Patent. BlackBerry's website further advertises that the BlackBerry Priv provides video decoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/priv-by-blackberry/specifications.html>), BlackBerry Classic provides video decoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-classic/specifications.html>), the BlackBerry DTEK50 provides video decoding in MPEG-4, H.264, and H.265 (<http://us.blackberry.com/smartphones/dtek50-by-blackberry/specifications.html>), the BlackBerry Leap provides video decoding in H.264 (<http://us.blackberry.com/smartphones/blackberry-leap/specifications.html>), the BlackBerry Z3 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-z3/10.3.2/help/mba1344953159594.html>), the BlackBerry Porsche Design P'9982 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/p9982-from-blackberry/current/help/mba1344953159594.html>), the BlackBerry Porsche Design P'9983 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/p9983-from-blackberry/current/help/mba1344953159594.html>), the BlackBerry Z30 provides decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-z30/current/help/mba1344953159594.html>), the BlackBerry Q5 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-q5/current/help/mba1344953159594.html>), the BlackBerry Q10 provides video decoding in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-q10/current/help/mba1344953159594.html>), and the BlackBerry Z10 provides video decoding

in H.264 and MPEG-4 (<http://help.blackberry.com/en/blackberry-z10/current/help/mba1344953159594.html>). User manuals for the BlackBerry Leap, BlackBerry Classic, BlackBerry Passport, BlackBerry Porsche Design P'9983, BlackBerry Porsche Design P'9982, BlackBerry Z3, BlackBerry Z30, BlackBerry Q5, BlackBerry Q10, and BlackBerry Z10 instruct users how to play videos on the smartphones, including videos in H.264 and MPEG-4 format. User manuals for the BlackBerry Porsche Design P'9981, BlackBerry Bold 9900/9930, and BlackBerry Torch 9850/9860, advertise that these smartphones decode video using H.264 and/or MPEG-4, and instruct users how to play video files, including files in H.264 and/or MPEG-4 format. On information and belief, the H.265, H.264 and MPEG-4 decoding in the accused products implements CABAC. BlackBerry therefore infringes claims 1-3 of the '824 Patent in violation of 35 U.S.C. § 271(b) by inducing infringement of the '824 Patent.

61. VStream is entitled to recover from each Defendant the damages sustained by VStream as a result of each Defendant's wrongful acts in an amount subject to proof at trial.

62. Each Defendant's infringement of the '824 Patent is causing, and will continue to cause, irreparable harm to VStream for which there is no adequate remedy at law unless and until enjoined by this Court.

JURY DEMAND

63. VStream demands a trial by jury on all issues.

PRAYER FOR RELIEF

Plaintiff VStream Technologies LLC respectfully requests this Court to enter judgment in its favor against each Defendant and grant the following relief:

- A. An adjudication that each Defendant has infringed and/or continues to infringe claims of the '731, '971, '647, '183, and '824 Patents;
- B. An award of damages to VStream adequate to compensate for each Defendant's acts of infringement together with prejudgment interest;
- C. An award of VStream's costs of suit and reasonable attorneys' fees as permitted under 35 U.S.C. § 285, or as otherwise permitted by law;
- D. A grant of permanent injunction in accordance with 35 U.S.C. § 283, enjoining each Defendant from further acts of infringement; and
- E. For any further relief that this Court deems just and proper.

Dated: September 7, 2016

Respectfully submitted,

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**ATTORNEYS FOR VSTREAM
TECHNOLOGIES LLC**

CERTIFICATE OF SERVICE

I hereby certify that on September 7, 2016, I electronically filed the foregoing document with the clerk of the court for the U.S. District Court, Eastern District of Texas, Tyler Division, using the electronic case filing system of the court. The electronic case filing system sent a “Notice of Electronic Filing” to the attorneys of record who have consented in writing to accept this Notice as service of this document by electronic means.

/s/ John S. Kyle

John S. Kyle