

**UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION**

T-REX PROPERTY AB,

Plaintiff,

v.

BARCO, INC.,

Defendant.

Case No.: 1:16-cv-6938

**JURY TRIAL DEMANDED**

**PLAINTIFF'S THIRD AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff T-Rex Property AB for its Third Amended Complaint against Defendant Barco, Inc., states as follows:

**NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. §§ 271, 281, 283, 284 and 285.

**PARTIES**

2. Plaintiff T-Rex Property AB is a company organized and existing under the laws of Sweden with its principal place of business at Vårvägen 6, 18274 Stocksund, Sweden.

3. On information and belief, Defendant Barco, Inc., is a Delaware corporation, with its principal office at 3059 Premier Parkway, Suite 400, Duluth, Georgia 30097.

**JURISDICTION AND VENUE**

4. This Court has subject matter jurisdiction over this patent infringement action under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Defendant, because, on information and belief, Defendant regularly transacts business in the State of Illinois and this judicial district and it has thereby purposefully availed itself of the benefits and protections of the laws of the State of

Illinois. Furthermore, this Court has personal jurisdiction over Defendant because, on information and belief, Defendant has committed acts of patent infringement giving rise to this action within the State of Illinois and has thus established minimum contacts such that the exercise of personal jurisdiction over Defendant does not offend traditional notions of fair play and substantial justice.

6. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391 and 1400(b).

### **THE PATENTS-IN-SUIT**

7. The allegations set forth in the foregoing paragraphs 1 through 6 are hereby re-alleged and incorporated herein by reference.

#### **The '470 Patent**

8. On January 16, 2007, U.S. Patent Number RE39,470 (the "'470 Patent"), entitled "Digital Information System," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '470 Patent is attached as Exhibit A to this Complaint.

9. The '470 Patent is a reissue of U.S. Patent Number 6,005,534, which was filed on July 2, 1996 and which claims priority under 35 U.S.C. § 119(e) to U.S. Provisional Patent Application Number 60/017,403, which was filed on May 14, 1996. The '534 Patent also claims priority under 35 U.S.C. § 119(a)-(d) to foreign patent application number 9601603-5, which was filed on April 26, 1996 in Sweden. As "[p]riority under section 119, 365(a), 365(b), 386(a), or 386(b) shall not be taken into account in determining the term of a patent," (35 U.S.C. § 154(a)(3)), the '470 Patent expires 20 years from July 2, 1996.

10. The innovations disclosed in the '470 Patent "relate[] to a method and apparatus for controlling and coordinating" electronic displays "in a digital information system for displaying information on at least one display device . . . said information being displayed in places that are accessible to and frequented by a general public." ('470 Patent at 1:15-21.) "An object of the present invention is to provide a flexible system in which external information mediators are able to dynamically control in real time the transmission of display instructions to a larger public

in different places” “and to enable similar or specific information to be displayed in places that are mutually far apart.” (*Id.* at 2:39-42; 2:52-54.)

11. A system operating according to an embodiment of the '470 Patent can include a control center with a communication interface that connects devices to create and update a display list in real time using control instruction fields sent from external mediators and to transmit and display the desired images to one or more electronic displays that can be controlled independently of other electronic displays. (*Id.* at 3:4-19; 4:42-45.) In embodiments, the control center can include one or more servers, workstations, and databases stored on one or more physical storage devices, and can include redundancy, of both computer hardware and the information stored, where the devices can be connected using a network, such as a LAN (Local Area Network) or by using a cable-carried ISDN solution (Integrated Services Digital Network) or other fixed lines that have a similar capacity. (*Id.* at 4:57-5:16; 5:59-67; 6:41-59; 12:55-13:7.) In one embodiment of the devices or projectors, the projector is a large picture screen in LCD or LED technology or the like that includes or is connected to a computer. (*Id.* at 6:26-32.)

12. In one embodiment of the invention, personnel operating a work station can enter information to be displayed from an external mediator via projector control instructions in the exposure list created by the server. (*Id.* at 8:10-26.) Operators are able to interrupt a queue in the server in order to update the exposure list with information generated centrally from the control center or with information from an external information mediator. (*Id.*)

13. Information mediators can use an exposure program to deliver complete images (*e.g.* an image, a series of images or a video clip) for display which would not require processing by the control center. (*Id.* at 11:19-28.) These can be dynamically added to the exposure list by the exposure handler. (*Id.*) External information mediators can thus deliver a complete image for display (an image, a series of images or a video clip) which can be processed automatically and inserted into the exposure list, or an administrator can select information from an external mediator and process the information so that it can be inserted into the exposure list via the exposure handler. (*Id.* at 8:27-41.)

### **The '334 Patent**

14. On June 3, 2008, U.S. Patent Number 7,382,334, entitled “Digital Information System,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '334 Patent is attached as Exhibit B to this Complaint.

15. The innovations described by the '334 Patent relate to methods and arrangements “for controlling and coordinating” digital display devices “in a digital information system for displaying information on at least one display device” “wherein the information is displayed in places that are accessible to and frequented by a general public.” ('334 Patent at Abstract; 1:13-24; 5:20-32.) The present invention is able “to provide a flexible system in which external information mediators are able to dynamically control in real time the transmission of display instructions to a larger public in different places” “and to enable similar or specific information to be displayed in places that are mutually far apart.” (*Id.* at 2:56-60; 3:5-11.)

16. A system operating according to an embodiment of the '334 Patent can include a control center with a communication interface that connects devices to create and update a display list in real time using control instruction fields sent from external mediators and to transmit and display the desired images to one or more electronic displays that can be controlled independently of other electronic displays. (*Id.* at 3:38-60; 5:29-30.) In embodiments, the control center can include one or more servers, workstations, and databases stored on one or more physical storage devices, and can include redundancy, of both computer hardware and the information stored, where the devices can be connected using a network, such as a LAN (Local Area Network) or by using a cable-carried ISDN solution (Integrated Services Digital Network) or other fixed lines that have a similar capacity. (*Id.* at 6:17-45; 7:17-29; 11:60-67.) In some embodiments, a relational database can be used to store image and video data and each electronic display can be assigned a unique TCP/IP (Transmission Control Protocol / Internet Protocol) address such that each display can be individually addressed and sent content for display. (*Id.* at 14:50-15:8.)

17. In one embodiment of the invention, personnel operating a work station can enter information to be displayed from an external mediator via projector control instructions in the exposure list created by the server. (*Id.* at 9:45-61.) Operators are able to interrupt a queue in the server in order to update the exposure list with information generated centrally from the control center or with information from an external information mediator. (*Id.*)

18. Information mediators can use an exposure program to deliver complete images (*e.g.*, an image, a series of images or a video clip) for display which would not require processing by the control center. (*Id.* at 12:12-22.) These can be dynamically added to the exposure list by the exposure handler. (*Id.*) External information mediators can thus deliver a complete image for display (an image, a series of images or a video clip) which can be processed automatically and inserted into the exposure list, or an administrator can select information from an external mediator and process the information so that it can be inserted into the exposure list via the exposure handler. (*Id.* at 9:62-10:9.)

### **The '603 Patent**

19. On August 6, 2002, U.S. Patent Number 6,430,603, entitled “System for Direct Placement of Commercial Advertising, Public Service Announcements and Other Content on Electronic Billboard Displays” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '603 Patent is attached as Exhibit C to this Complaint.

20. The innovations described by the '603 Patent “relate[] to systems permitting advertisers to target geographical regions and demographic groups with ever changing, current advertising content without incurring the high fixed cost of traditional single-message billboards.” ('603 Patent at 1:7-10.)

21. A typical system can include a network that connects a central information processing center with a number of electronic displays. (*Id.* at 2:7; 2:54-56.) “The means for transmitting content information” from the central information processing center “to the display

locations may take a number of forms.” (*Id.* at 3:31-32.) “[T]he means include: [a] High speed cable [b] Satellite [c] Dedicated phone [d] High speed line (e.g., ISDN) [e] Cellular or PCS [f] Internet [g] Radio/radio pulse transmission [h] High speed optical fiber.” (*Id.* at 3:35-45.) “[A]ny form” of network “may be utilized” depending on the system requirements “at various locations within the network,” which can include combinations of the examples listed. (*Id.* at 3:32-33.)

22. Plaintiff T-Rex Property AB is the assignee and owner of the right, title and interest in and to the ‘470 Patent, the ‘334 Patent, and the ‘603 Patent (collectively, the “Patents-In-Suit”), including the right to assert all causes of action arising under the Patents-In-Suit and the right to any remedies for infringement.

### **BACKGROUND ON THE PRIOR ART AND THE ‘470 PATENT**

23. In 1994, the traditional Out-of-Home advertising industry was in need of a change, an evolutionary improvement. See Declaration of Mats Hylin (“Hylin Decl.”) at ¶ 8 (attached as Exhibit D, and hereby incorporated, in its entirety, by reference herein at paragraph 23). Mats Hylin, the first named inventor of the ‘470 Patent, recognized that the “demands from advertisers” were not being met; what advertisers wanted was “more flexibility and speed” and “the possibility of changing the message” instead of “having the same advertisement [displayed] during the whole period.” *Id.* This may be because advertisers wish to avoid a stagnant message, or because advertisers desire campaign evaluation feedback —“the results of a first campaign are fundamental in order to create the next campaign.” *Id.* at ¶ 15. In addition to addressing these revenue issues, distribution efficiencies were “one of the most important areas to create higher margins.” *Id.* at ¶ 6. One method to address this was through the use of digital advertising copy—which could be distributed via “the internet, or any other network”—rather than incur the costs associated with physical distribution and display of paper or other printed advertising copy. *Id.* at ¶¶ 8-9.

24. With respect to the ‘470 Patent and claim 25 in particular, claim 25 “solves specific needs and problems over other technologies that existed in 1996.” Declaration of Zaydoon Jawadi (“Jawadi Decl.”) ¶ 22 (attached as Exhibit E, and hereby incorporated, in its entirety, by reference

herein at paragraph 24). Such problems and shortcomings included “controlling and coordinating digital signage displays in concrete, specific ways beyond merely scheduling content to be displayed on remote screens.” *Id.* “Prior to the inventions disclosed in claim 25 . . . there was no flexible way for external information mediators . . . to dynamically control and coordinate, display devices located in different places.” *Id.* at ¶ 23. “Content from external information mediators could not be directly displayed; instead, displaying such content required administrative processing and manual intervention to update the display systems.” *Id.*

25. The inventions embodied in claim 25 “improved the operation of digital signage that existed in 1996” by “impos[ing] meaningful limitations” that “allow[ed] external information mediator(s) to dynamically control and coordinate display devices located in different places, extending the usefulness of the digital signage technology.” *Id.* at ¶¶ 26-27. “[C]laim 25 of the ’470 Patent incorporates unique, innovative, non-conventional, non-generic elements” that work together to improve the operation of a digital signage system. *Id.* at ¶ 28. “The functions, application, and implementations of these elements inherently and necessarily are rooted in and require computer technology, communication technology, and digital display technology in order to overcome specific problems arising in the realm of digital signage in 1996.” *Id.* at ¶ 29. Importantly, “the claim goes beyond the mere concept of simply using a computer to perform distributed signage.” *Id.* “This is because computers, communication interfaces, and digital display devices are not ancillary or incidental additions but germane and integral parts of the inventions disclosed by claim 25 of the ’470 Patent.” *Id.* The limitations of claim 25 “relate to the functioning of hardware and software” that are “inextricably tied to digital signage computer technology, communication technology, and digital display technology” such that the “unique, innovative, non-conventional, non-generic” hardware and software incorporated in claim 25 are used to achieve these technological innovations. *Id.* at ¶¶ 28, 30.

26. The physical combination of elements that are referenced in claim 25 represent an innovation over the prior art. More particularly, claim 25 references an “information mediator.” At the time of the invention, in about the 1995 to 1996 time frame, the term “information

mediator,” within the context of the field of art, could have referred to “an agent between producer and consumer of information” where the “agent could be a software component, software with accompanying hardware, a system, an organization (such as advertising agency) or an individual.” *Id.* at ¶ 33. Claim 25 also references “location(s)” which at the time of the invention could have referred, again within the context of the field of art, to “a particular physical or geographical place or position where the message or advertisement is displayed on an electronic display device.” *Id.* at ¶ 34. Taking into account the meaning of these terms, as well as the claim as a whole, implementation of claim 25 would require “industrial computers, servers, PCs, networking routers or switches, networking cables, computer graphics capabilities, display devices . . . database management systems as well as specialized software drivers to interface between mediators and system computers, to decipher control lists, to create and update exposure lists, and to decipher and act upon exposure lists.” *Id.* at ¶ 35. Such a combination of elements represented a significant and non-conventional innovation over the prior art which resulted in an improvement in the operation of digital signage. *Id.* at ¶ 38.

27. “Furthermore, claim 25 . . . is distinct and different from the other claims of the ’470 Patent.” *Id.* at ¶ 37. “In particular, claim 25 . . . is distinct and different from claim 26 of the ’470 Patent.” *Id.* For example, “[c]laim 26 discloses a computerized control center, communication interfaces, means for generating and dynamically updating an exposure list, a means for displaying images and a computerized device situated at each location—limitations that claim 25 does not disclose.” *Id.*

28. Claim 25 embodies an entirely new combination of special purpose and interconnected physical equipment to present information publicly. The inventions embodied in claim 25 arose in a specialized context—back in or about the 1995 to 1996 time frame—and the inventors came up with a specific solution, manifested in a concrete combination of devices, interfaces, and software, networked together with physical displays viewable by the target audience, to resolve particular problems.

29. With respect to claim 26 of the '470 Patent, the inventions embodied in claim 26 “improved the operation of digital signage that existed in 1996” *Id.* at ¶ 45. “[C]laim 26 of the '470 Patent incorporates unique, innovative, non-conventional, non-generic elements.” *Id.* at ¶ 47. These elements include a “computerized control center[,] . . . means (within the computerized control center) for generating and dynamically updating an exposure list . . . [and] computerized devices” which are situated at “a plurality of locations.” *Id.* at ¶¶ 40, 47. The computerized devices are “electronically coupled to the computerized control center” and include a means “for displaying images in accordance with the exposure list.” *Id.* at ¶ 47. The limitations of claim 26 “relate to both the hardware and software technology for digital signage, as well as to the functioning of hardware and software technology for digital signage” and are “manifested in a concrete combination of devices, interfaces, and software, networked together with physical displays viewable by the target audience.” *Id.* at ¶¶ 41, 49.

30. The physical combination of elements that are referenced in claim 26 represent an innovation over the prior art. More particularly, in addition to “information mediator” and “location(s),” claim 26 references “communication interfaces.” At the time of the invention, in about the 1995 to 1996 time frame, the term communication interfaces, within the context of the field of art, could have referred to “electronic hardware, software, and protocols allowing systems (such as computers) to communicate and exchange data.” *Id.* at ¶ 54. Claim 26 also references a “computerized control center” which at the time of the invention could have referred, again within the context of the field of art, to “a computer or set of computers that control and coordinate the interaction between networked computers or equipment.” *Id.* at ¶ 55. Such a combination of elements represented a significant and non-conventional innovation over the prior art which resulted in an improvement in the operation of digital signage. *Id.* at ¶ 59.

31. Claim 26 embodies an entirely new combination of special purpose and interconnected physical equipment to present information publicly. The inventions embodied in claim 26 arose in a specialized context—back in or about the 1995 to 1996 time frame—and the inventors came up with a specific solution, manifested in a concrete combination of devices,

interfaces, and software, networked together with physical displays viewable by the target audience, to resolve particular problems in digital technology.

### **BACKGROUND ON THE '334 PATENT**

32. Claim 22 the '334 Patent “solves specific needs and problems over other technologies that existed in 1996.” Jawadi Decl. at ¶ 63. Such problems and shortcomings included “controlling and coordinating digital signage displays in concrete, specific ways beyond merely scheduling content to be displayed on remote screens.” *Id.* More specifically, “[p]rior to the inventions disclosed in claim 22 . . . there was no flexible way for external information mediators . . . to dynamically control and coordinate, in real time, display devices located in different places.” *Id.* at ¶ 64. “Content from external information mediators could not be directly displayed, and particularly not in real time or in near real time; instead, displaying such content required administrative processing and manual intervention to update the display systems.” *Id.*

33. The inventions embodied in claim 22 “improved the operation of digital signage that existed in 1996” by “impos[ing] meaningful limitations” that “allow[ed] external information mediator(s) to dynamically control and coordinate, in real time, display devices located in different places, extending the usefulness of the digital signage technology.” *Id.* at ¶¶ 67-68. “[C]laim 22 of the '334 Patent incorporates unique, innovative, non-conventional, non-generic elements” that work together to improve the operation of a digital signage system. *Id.* at ¶ 69. “The functions, application, and implementations of these elements inherently and necessarily are rooted in and require computer technology, communication technology, and digital display technology in order to overcome specific problems arising in the realm of digital signage in 1996.” *Id.* at ¶ 70. Importantly, “the claim goes beyond the mere concept of simply using a computer to perform distributed signage.” *Id.* “This is because computers, communication interfaces, and digital display devices are not ancillary or incidental additions but germane and integral parts of the inventions disclosed by claim 22 of the '334 Patent.” *Id.* The limitations of claim 22 “relate to the functioning of hardware and software” that are “inextricably tied to digital signage computer technology,

communication technology, and digital display technology” such that the “unique, innovative, non-conventional, non-generic” hardware and software incorporated in claim 22 are used to achieve these technological innovations. *Id.* at ¶¶ 69, 71.

34. The physical combination of elements that are referenced in claim 22 represent an innovation over the prior art. Taking into account the meaning of these elements, as well as the claim as a whole, implementation of claim 22 would require “industrial computers, servers, PCs, networking routers or switches, networking cables, computer graphics capabilities, display devices . . . database management systems as well as specialized software drivers to interface between mediators and system computers, to decipher control lists, to create and update exposure lists, and to decipher and act upon exposure lists.” *Id.* at 74. Such a combination of elements represented a significant and non-conventional innovation over the prior art which resulted in an improvement in the operation of digital signage. *Id.* at ¶ 77.

35. “Furthermore, claim 22 of the ’334 Patent is distinct and different from the other claims of the ’334 Patent as well as being distinct and different from the claims of the ’470 Patent.” *Id.* at ¶ 76. “In particular, claim 22 . . . is distinct and different from claim 32 of the ’334 Patent. *Id.* For example, “[c]laim 32 discloses computerized control center means (hardware and/or software . . .), communication interfaces (of the control center), computerized means (hardware and/or software . . .) . . . and exposure handler means (hardware and/or software . . .)—limitations that claim 22 does not disclose.” *Id.*

36. Claim 22 embodies an entirely new combination of special purpose and interconnected physical equipment to present information publicly. The inventions embodied in claim 22 arose in a specialized context—back in or about the 1995 to 1996 time frame—and the inventors came up with a specific solution, manifested in a concrete combination of devices, interfaces, and software, networked together with physical displays viewable by the target audience, to resolve particular problems.

37. The inventions embodied in claim 32 also “improved the operation of digital signage that existed in 1996” *Id.* at ¶ 84. “[C]laim 32 of the ’334 Patent incorporates unique,

innovative, non-conventional, non-generic elements.” *Id.* at ¶ 86. These elements include “a computerized control center means,” “computerized means . . . for coordinating and controlling electronic displays” and “exposure handler means . . . for creating and updating an exposure list.” *Id.* The limitations of claim 32 “relate to both the hardware and software technology for digital signage, as well as to the functioning of hardware and software technology for digital signage.” *Id.* at ¶ 88.

38. The physical combination of elements that are referenced in claim 32 represent an innovation over the prior art. Taking into account the meaning of these elements, as well as the claim as a whole, the arrangement of claim 32 would require “industrial computers, servers, PCs, networking routers or switches, networking cables, computer graphics capabilities, display devices . . . database management systems as well as specialized software drivers to interface between mediators and system computers, to decipher control lists, to create and update exposure lists, and to decipher and act upon exposure lists.” *Id.* at ¶ 93. “Due to the application of outdoor advertising, additional specialized equipment, such as special duty and/or ruggedized computers (which could include ruggedized media players, for example) could be necessary.” *Id.* Such a combination of elements represented a significant and non-conventional innovation over the prior art which resulted in an improvement in the operation of digital signage. *Id.* at ¶ 96.

39. “Furthermore, claim 32 of the ’334 Patent . . . is distinct and different from the claims of the ’470 Patent.” *Id.* at ¶ 95.

### **BACKGROUND ON THE ‘603 PATENT**

40. Claim 42 the ’603 Patent “solves specific needs and problems that existed in 1999.” Jawadi Decl. ¶ 101. Such problems and shortcomings included “targeting geographical regions and demographic groups with ever changing, current advertising content in concrete, specific ways beyond merely scheduling content to be displayed on remote screens.” *Id.* More specifically, “the inventions disclosed in claim 42” allowed “content providers . . . to directly access a network of electronic displays located in various geographic locations and to directly send their own

content—which could be formatted for the use of a split screen display—to the network to be displayed at locations and times selected by the providers.” *Id.* at ¶ 102.

41. “Claim 42 incorporates non-conventional, non-generic hardware and software that imposes meaningful limitations to improve on the existing 1999 era digital signage technology.” *Id.* “The functions, application, and implementations of these elements inherently and necessarily are rooted in and require computer technology, communication technology, and digital display technology in order to achieve specific solutions in the realm of digital signage.” *Id.* at ¶ 104. Importantly, “the claim goes beyond the mere concept of simply using a computer to perform distributed signage.” *Id.* “This because computers, communication interfaces, and digital display devices are not ancillary or incidental additions but germane and integral parts of the inventions disclosed by claim 42 of the ’603 Patent. *Id.* The limitations of claim 42 “relate to both the hardware and software technology for digital signage, as well as to the functioning of hardware and software technology for digital signage” that are “inextricably tied to digital signage computer technology, communication technology, and digital display technology” such that the “unique, innovative, non-conventional, non-generic” hardware and software incorporated in claim 42 are used to achieve these technological innovations. *Id.* at ¶¶ 103, 105.

42. “Furthermore, claim 42 of the ’603 Patent is distinct and different from the claims of the ’334 Patent and it is distinct and different from the claims of the ’470 Patent.” *Id.* at ¶ 108.

43. Claim 42 embodies a new combination of special purpose and interconnected physical equipment to present information publicly. The inventions embodied in claim 42 arose in a specialized context—in or about the 1998 to 1999 time frame—and the inventors came up with a specific solution, manifested in a concrete combination of devices, interfaces, and software, networked together with physical displays viewable by the target audience, to resolve particular problems.

44. The inventions embodied in claim 42 “improve upon existing digital signage.” *Id.* at ¶ 110. Claim 42 includes a “combination of interconnected hardware and software elements that

are incorporated within the limitations of claim 42—and that claim 42 as a whole—improves upon existing digital signage hardware.” *Id.*

**COUNT I – DIRECT INFRINGEMENT OF U.S. PATENT NO. RE39,470**

45. The allegations set forth in the foregoing paragraphs 1 through 44 are hereby alleged and incorporated herein by reference.

46. In violation of 35 U.S.C. § 271, Defendant has directly and continues to directly infringe, literally or under the doctrine of equivalents, one or more claims of the '470 Patent by making, using, offering for sale, selling, or importing devices or systems, in this judicial district and elsewhere in the United States (directly or through intermediaries), that perform the steps of receiving control instructions from at least one external information mediator, using the control instructions to generate an exposure list that specifies three or more of the following items: i) what information content is to be displayed; ii) at which of a plurality of locations the information content is to be displayed; iii) when the information content is to be displayed for each location at which content is to be displayed; and iv) how long the information content is to be displayed for each location at which content is to be displayed, displaying images at one or more of the locations in accordance with the exposure list, and permitting the exposure list to be dynamically updated as claimed in at least claim 25 of the '470 Patent, without the authority of Plaintiff T-Rex Property AB.

47. More specifically, Defendant's instrumentalities that infringe claim 25 of the '470 Patent include, by way of example only, *inter alia*, Defendant's digital signage networks, including, for example, its X2O real-time visual communications network and platform (the "X2O Platform"), Alchemy digital cinema projectors with Web Commander (the "Alchemy Platform"), and dZine digital signage systems, which selectively display digital information at Defendant's customer locations.

48. Defendant's X2O Platform creates and distributes content on digital displays at one or more of a plurality of locations. For example, the X2O Platform (including, for example, The

Channel Designer), as dictated by the user, publishes information to multiple devices, including digital signage screens, video walls, interactive kiosks and mobile devices, and is composed of a network of players that communicate with a central server and a Web-based portal used for status monitoring and content distribution. The X2O Platform is used to target players with content simultaneously to deliver a combined message to multiple display channels from a single, easy-to-use interface.

49. Defendant's Alchemy Platform, as dictated by the user, creates and distributes content on digital displays at one or more of a plurality of locations. For example, the Alchemy Platform allows users to load, manage, and playback cinema content on Defendant's projectors, and seamlessly blends projector control over a full-fledged screen management system.

50. Defendant's dZine digital signage systems (including, for example, the DISplayer client software and the DISplayStudio server software), as dictated by the user, creates and distributes content on digital displays at one or more of a plurality of locations. For example, dZine's Content Creation Page Editor Software allows creation of dynamic content for the display, including basic text and images to videos and flash objects. For example, the dZine system can be utilized in connection with advertising in a range of retail businesses, banks, movie theatres and a variety of other locations, in connection with infotainment in a variety of locations such as public transportation terminals, post offices and ski pistes, among others, in connection with providing travel information at airports, and in connection with providing real-time useful information at companies and schools to employees/students such as quarterly results, classroom information, etc. Further, dZine's DISplayer component (e.g., DISplayer, DISplayer<sup>2</sup> Basic, DISplayer<sup>3</sup> eco products, DISplayer<sup>2</sup> Mini, DISplayerLite, DISplayerLite<sup>2</sup> Mini, and DISplayer<sup>3</sup>) allows for content visualization on any type of display and can be used in a fixed or a mobile application.

51. Defendant's X2O Platform receives control instructions from at least one external information mediator. For example, Defendant's X2O Platform receives control instructions from users inside and/or outside of its customer's organization. The X2O Platform allows users to

schedule content on any permissible network and allows users to quickly create high-quality content channels for any type of display from a simple portal.

52. Defendant's Alchemy Platform receives control instructions from at least one external information mediator. For example, Defendant's Alchemy Platform allows users inside and outside an organization to remotely control content on the projections, and allows access to the Web Commander and its modules for controlling content display.

53. Operation of Defendant's dZine digital signage systems involves receipt of control instructions from at least one external information mediator. For example, dZine's Content Creation- Page Editor software allows creation of dynamic content for the display, including basic texts and images to videos and flash objects. Content and content instructions are received from an external information mediator for dynamic display. Further, dZine's DISplayer component (e.g., DISplayer, DISplayer<sup>2</sup> Basic, DISplayer<sup>3</sup> eco products, DISplayer<sup>2</sup> Mini, DISplayerLite, DISplayerLite<sup>2</sup> Mini, and DISplayer<sup>3</sup>) allows for content visualization on any type of display and can be used in a fixed or a mobile application.

54. The control instructions received by Defendant's X2O Platform are used to generate an exposure list, with said exposure list specifying three or more of the following items: i) what information content is to be displayed; ii) at which of a plurality of locations the information content is to be displayed; iii) when the information content is to be displayed for each location at which content is to be displayed; and iv) how long the information content is to be displayed for each location at which content is to be displayed. For example, Defendant's X2O Platform, including content management software, maps, distributes, and schedules content to displays, and the Schedule Manager Portal of the X2O Platform allows quick scheduling of content. The X2O Platform enables users to schedule different types of content at specific times, for specific durations, and at specific players and locations.

55. The control instructions received by Defendant's Alchemy Platform are used to generate an exposure list, with said exposure list specifying three or more of the following items: i) what information content is to be displayed; ii) at which of a plurality of locations the

information content is to be displayed; iii) when the information content is to be displayed for each location at which content is to be displayed; and iv) how long the information content is to be displayed for each location at which content is to be displayed. For example, the scheduler module of the Alchemy Platform allows users to schedule and distribute the content, including specifications on what content is to be displayed, at which locations the content is to be displayed, when the content is to be displayed, and how long the content is to be displayed.

56. The control instructions received by Defendant's dZine digital signage systems are used to generate an exposure list, with said exposure list specifying three or more of the following items: i) what information content is to be displayed; ii) at which of a plurality of locations the information content is to be displayed; iii) when the information content is to be displayed for each location at which content is to be displayed; and iv) how long the information content is to be displayed for each location at which content is to be displayed. For example, dZine's Information Display System ("IDS") Server (e.g., DISplay Studio 5) allows for content distribution and scheduling. The content management software and IDS Server of the dZine digital signage systems allow for creation and determination of the content to be displayed, determinations as to which locations or displays to display the content, and when and how long the content is to be displayed at the locations. The IDS Server controls the players from a distance so content can be adjusted at any time and almost any place. An example of a dZine IDS device is the dZine Graphic Terminal ("GT"), which purports to be an intelligent monitor equipped with a Graphic Engine Board. The dZine GT purports to support high quality graphics and have various communication capabilities. Via a network, an IDS Server can display text, pictures, video and much more in a fact reliable way by means of an Ethernet, RS-232, or RS-485 connection to the DISplayer.

57. Defendant's X2O Platform displays images at one or more of said locations in accordance with said exposure list. For example, as dictated by the user, Defendant's X2O Platform, including its content management software, creates and distributes content and is used for small (less than 5 display) as well as large (up to 1000 displays) installations. The X2O

Platform publishes information to multiple devices and across multiple locations from one interface in accordance with the exposure list.

58. Defendant's Alchemy Platform displays images at one or more of said locations in accordance with said exposure list. For example, the Web Commander of the Alchemy Platform allows users to control and manage scheduled content to display at one or more locations in accordance with the exposure list.

59. Defendant's dZine digital signage systems display images at one or more of said locations in accordance with said exposure list. For example, dZine's IDS Server allows for content distribution and scheduling and can be used for small (<5 displays) as well as for large (>1000 displays) installations. The IDS Server controls the players from a distance so content can be adjusted at any time and almost any place. Further, the content can be shared between users. Further, dZine's DISplayer component (e.g., DISplayer, DISplayer<sup>2</sup> Basic, DISplayer<sup>3</sup> eco products, DISplayer<sup>2</sup> Mini, DISplayerLite, DISplayerLite<sup>2</sup> Mini, and DISplayer<sup>3</sup>) allows for content visualization on any type of display, which can be used in a fixed or a mobile application, and interacts with the content management software to display images at locations in accordance with the exposure list.

60. Defendant's X2O Platform permits the exposure list to be dynamically updated. For example, Defendant's X2O Platform allows content to be updated and rendered dynamically in real-time which allows updates to be delivered to screens within seconds.

61. Defendant's Alchemy Platform permits the exposure list to be dynamically updated. For example, upon information and belief, Defendant's Alchemy Platform allows content to be rendered dynamically and uses a player to dynamically control the playback of content.

62. Defendant's dZine digital signage systems permit the exposure list to be dynamically updated. For example, dZine's Content Creation-page Editor software allows creation of dynamic content for the display, including basic texts and images to videos and flash objects. Further, dZine's IDS Server allows for content distribution and scheduling. The IDS

Server controls the players from a distance so content can be adjusted at any time and almost any place. Further, the software component allows the system to run different controls automatically while the customer can keep full control over the different playlists at any time.

63. In violation of 35 U.S.C. § 271, Defendant has directly infringed and continues to directly infringe, literally or under the doctrine of equivalents, one or more claims of the '470 Patent by making, using, offering for sale, selling, or importing devices or systems, in this judicial district and elsewhere in the United States (directly or through intermediaries), that comprise a computerized control center that has a plurality of communication interfaces for receiving control instructions from at least one external information mediator, the computerized control center includes a means for generating and dynamically updating an exposure list from the control instructions, the exposure list specifying three or more of the following items: i) what information content is to be displayed; ii) at which of the plurality of locations the information content is to be displayed; iii) when the information content is to be displayed for each location at which content is to be displayed; and iv) how long the information content is to be displayed for each location at which content is to be displayed, a computerized device situated at each one of the plurality of locations and electronically coupled to the computerized control center, and a means for displaying images in accordance with the exposure list associated with each one of the computerized devices as claimed in at least claim 26 of the '470 Patent, without the authority of Plaintiff T-Rex Property AB.

64. More specifically, Defendant's instrumentalities that infringe claim 26 of the '470 Patent include Defendant's X2O Platform, Alchemy Platform, and dZine digital signage systems, which selectively display digital information at one or more of a plurality of locations.

65. Defendant's X2O Platform, Alchemy Platform, and dZine digital signage systems comprise a computerized control center that has a plurality of communication interfaces for receiving control instructions from at least one external information mediator, the computerized control center includes means for generating and dynamically updating an exposure list from the control instructions, the exposure list specifying three or more of the following items: i) what

information content is to be displayed; ii) at which of the plurality of locations the information content is to be displayed; iii) when the information content is to be displayed for each location at which content is to be displayed; and iv) how long the information content is to be displayed for each location at which content is to be displayed. For example, Defendant's X2O Platform, Alchemy Platform, and dZine digital signage systems (e.g., dZine digital signage systems operating with eDISplayer, DISplayer<sup>2</sup> Basic, DISplayer<sup>3</sup> eco products, DISplayer<sup>2</sup> Mini, DISplayerLite, DISplayerLite<sup>2</sup> Mini, and DISplayer<sup>3</sup>) include a computerized control center with Internet connectivity that receives control instructions from people inside or outside an organization and allows for dynamic updating of content to be displayed. Defendant's computerized control center with content management software creates, maps, distributes, and schedules dynamic content. In so doing, the content management software of the systems allows for creation and determination of the content to be displayed, at which locations or displays to display the content, and when and how long the content is to be displayed at the locations. See also above Paragraphs 54-56.

66. Defendant's X2O Platform comprises a computerized device that is situated at each location and each computerized device is electronically coupled to the computerized control center. For example, Defendant's X2O Player of the X2O Platform is an advanced broadcast rendering application installed on a personal computer or dedicated player device that is directly connected to a display screen, and the MPP-1 of the X2O Platform is a powerful media player that allows dynamic content rendering for the display network.

67. Defendant's Alchemy Platform comprises a computerized device that is situated at each location and each computerized device is electronically coupled to the computerized control center. For example, upon information and belief, Defendant's Alchemy Platform includes Web Commander which is ran on a computer at locations to allow users to load, manage, and playback cinema content on Defendant's projector.

68. Defendant's dZine digital signage systems comprise a computerized device that is situated at each location and each computerized device is electronically coupled to the

computerized control center. For example, the DISplayer of the dZine digital signage systems is situated at a location near the electronic displays and is networked and electronically coupled to the IDS Server. For example, the dZine GT purports to be an intelligent monitor equipped with a Graphic Engine Board. The dZine GT purports to support high quality graphics and have various communication capabilities. Via a network, an IDS Server can display text, pictures, video, and much more in a fact reliable way by means of an Ethernet, RS-232, or RS-485 connection to the DISplayer.

69. Defendant's X2O Platform comprises a means for displaying images in accordance with the exposure list that is associated with each of the computerized devices. For example, the X2O Player allows the displaying of images based on user input of the exposure list to play content at the correct time, in the right format, in multiple screen areas running different media types, and the MPP-1 provides a digital video outlet for the displaying of images.

70. Defendant's Alchemy Platform comprises a means for displaying images in accordance with the exposure list that is associated with each of the computerized devices. For example, the Web Commander of the Alchemy Platform is part of the integrated assembly of the platform that allows content to be displayed on Defendant's projectors in accordance with the exposure list.

71. Defendant's dZine digital signage systems comprise a means for displaying images in accordance with the exposure list that is associated with each of the computerized devices. For example, dZine's IDS Server (e.g., DISplay Studio 5) allows for content distribution and scheduling, and the dZine DISplayer allows for the visualization and display of the distributed content.

72. Defendant has directly infringed and continues to directly infringe one or more claims of the '470 Patent, including at least claims 25 and 26, by making, using, selling, or offering for sale its digital signage networks in Illinois and elsewhere in the United States.

73. Defendant has had knowledge of the '470 Patent since at least the date that the original Complaint was served.

74. Because of Defendant's infringing activities, Plaintiff T-Rex Property AB has suffered damages and will continue to suffer damages in the future. T-Rex Property AB is entitled to recover from Defendant the damages sustained by T-Rex Property AB as a result of Defendant's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

**COUNT II – INDUCED INFRINGEMENT OF U.S. PATENT NO. RE39,470**

75. The allegations set forth in the foregoing paragraphs 1 through 74 are hereby re-alleged and incorporated herein by reference.

76. In violation of 35 U.S.C. § 271(b), Defendant has induced and/or continues to induce its customers to use Defendant's digital signage networks in a manner to infringe at least claims 25 and 26 of the '470 Patent.

77. Defendant has induced infringement and/or continues to induce infringement by marketing, promoting, soliciting, offering to sell, and selling its digital signage networks in Illinois and elsewhere in the United States that when used as intended and directed by Defendant, infringes at least claims 25 and 26 of the '470 Patent, either literally or under the doctrine of equivalents.

78. Defendant's customers directly infringe claim 25 of the '470 Patent by performing each step of the claimed method when using Defendant's X2O Platform, Alchemy Platform, and dZine digital signage systems (in the same manner that Defendant directly infringes as described above).

79. Defendant's customers directly infringe claim 26 of the '470 Patent by placing the claimed system into service when using Defendant's X2O Platform, Alchemy Platform, and dZine digital signage systems (in the same manner that Defendant directly infringes as described above).

80. Defendant induces and/or has in the past induced its customers to infringe claims 25 and 26 of the '470 Patent by instructing its customers through advertisements, brochures, and

manuals on how to use Defendant's digital signage networks in an infringing manner. For example, Defendant advertises and/or has advertised its digital signage systems on its website, touting "show the right message at the right time." *See*, <https://www.barco.com/en/solutions/Digital-signage>.

81. Defendant provides and/or has provided training and support that teaches and instructs its customers on how to use its digital signage networks in an infringing manner. *See, e.g.*, <https://www.barco.com/en/Support>.

82. Defendant induces and/or has in the past induced its customers to selectively display digital information at one or more of a plurality of locations by using its digital signage networks that employs Barco's networked solutions products and digital signage platform, including its X2O Platform, Alchemy Platform, and dZine digital signage systems.

83. Defendant has in the past and/or continues to make, use, and sell the infringing instrumentalities and has in the past and/or continues to encourage others to infringe.

84. Defendant has had knowledge of the '470 Patent since at least the date that the original Complaint was served.

85. Defendant has specific intent to induce infringement of the '470 Patent since at least the date that the original Complaint was served.

86. Defendant was willfully blind to, knew, or should have known its actions would induce infringement since at least the date that the original Complaint was served.

87. Defendant's infringement has injured and will continue to injure Plaintiff and Plaintiff is entitled to recover damages adequate to compensate it for Defendant's infringement, which in no event can be less than a reasonable royalty.

88. Plaintiff is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, 284, and 287.

**COUNT III – CONTRIBUTORY INFRINGEMENT OF U.S. PATENT NO. RE39,470**

89. The allegations set forth in the foregoing paragraphs 1 through 88 are hereby re-alleged and incorporated herein by reference.

90. In violation of 35 U.S.C. § 271(c), Defendant has contributed to and continues to contribute to infringement of at least claims 25 and 26 of the '470 Patent.

91. Defendant has contributed to infringement and continues to contribute to infringement by selling, offering to sell, or importing its digital media players (*e.g.*, MPP-1 or MPU-1).

92. Defendant directly infringes at least claims 25 and 26 of the '470 Patent and its customers directly infringe by using Defendant's digital signage networks (as described above).

93. Defendant's digital media players are a material part of its digital signage network and the infringement of at least claims 25 and 26 of the '470 Patent. Defendant's digital media players "ensure 24/7 reliability" of providing dynamic content and enable its customers to "engage passers-by via personalized, interactive messaging." For example, Defendant's MPP-1 allows for "multi-video playout, video stream decoding and networked video synchronization, complex multi-zone dynamic content rendering, quick real-time data as well as reliable audience-based interactivity." <https://www.barco.com/en/Products/Digital-signage/Digital-media-players/High-performance-digital-signage-player.aspx>. Defendant's MPU-1 media player allows for "single, dual or multi-head digital video outlets" and real-time display of data. <https://www.barco.com/en/Specsheets/4e07e8e3-337e-4cc4-a7a0-0c1c6540ce35/MPU-1.pdf>. Defendant's media players that provide digital media playout permit the selectively displaying of images at one or more of a plurality of locations, which constitutes a material part of the infringement of at least claims 25 and 26 of the '470 Patent.

94. Defendant's digital media players have no substantial, noninfringing uses. Defendant's digital media players, including its MPU-1 and MPP-1 media players, have no use and do not work except in conjunction with Defendant's X2O Premium "target signage solution"

and content management software, which comprise Defendant's infringing digital signage networks.

95. Defendant's media players have no commercial use except in connection with Defendant's infringing digital signage networks and the claims 25 and 26 of the '470 Patent. Defendant sells and offers to sell its media players only in conjunction with the use of its infringing digital signage networks.

96. Defendant was willfully blind, should have known, or knew use of its digital media players were made or especially adapted for use in infringement of claims 25 and 26 of the '470 Patent since at least the date the original Complaint was served.

97. Defendant continues to make, use, sell, and offer to sell, its digital media players and continues to contribute to infringement of at least claims 25 and 26 of the '470 Patent.

98. Defendant was willfully blind to, knew, or should have known its actions would contribute to infringement since at least the date that the original Complaint was served.

99. Defendant's infringement has injured and will continue to injure Plaintiff and Plaintiff is entitled to recover damages adequate to compensate it for Defendant's infringement, which in no event can be less than a reasonable royalty.

100. Plaintiff is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, 284, and 287.

**COUNT IV – DIRECT INFRINGEMENT OF U.S. PATENT NO. 7,382,334**

101. The allegations set forth in the foregoing paragraphs 1 through 100 are hereby re-alleged and incorporated herein by reference.

102. In violation of 35 U.S.C. § 271, Defendant has directly infringed and continues to directly, literally or under the doctrine of equivalents, one or more claims of the '334 Patent by making, using, offering for sale, selling, or importing devices or systems, in this judicial district and elsewhere in the United States (directly or through intermediaries), that perform the steps of

generating an exposure list comprising control instructions for coordinating and controlling electronic displays with regard to what shall be exposed, when it shall be exposed, where it shall be exposed and for how long it shall be exposed, using a control center for coordinating and controlling electronic displays, where the control center is able to create and update the exposure list in real time, with control instruction fields via dynamic booking of information, in time for exposure, from mediators, and where the exposure list enables each electronic display to be controlled, independently of other electronic displays, to receive the same or different information in accordance with the exposure list for the exposure of respective electronic display as claimed in at least claim 22 of the '334 Patent, without the authority of T-Rex Property AB.

103. More specifically, Defendant's instrumentalities that infringe claim 22 of the '334 Patent include, by way of example only, *inter alia*, Defendant's digital signage networks, including, for example, its X2O Platform, Alchemy Platform, and dZine digital signage systems, which expose information on at least one display device through the medium of at least one electronic display.

104. Defendant's X2O Platform generates an exposure list that comprises control instructions for coordinating and controlling electronic displays with regard to what is exposed, when it is exposed, where it is exposed, and for how long it shall be exposed. For example, Defendant's X2O Platform, including content management software, generates a list with instructions that map, distribute, and schedule content for electronic displays and allows for specification on what content is displayed, when it is display, where it is displayed, and for how long it is displayed.

105. Defendant's Alchemy Platform generates an exposure list that comprises control instructions for coordinating and controlling electronic displays with regard to what is exposed, when it is exposed, where it is exposed, and for how long it shall be exposed. For example, Defendant's Alchemy Platform includes a schedule module that can be used to create, schedule, and map what is exposed, when it is exposed, where it will be exposed, and for how long it will be exposed.

106. Defendant's dZine digital signage systems generate an exposure list that comprises control instructions for coordinating and controlling electronic displays with regard to what is exposed, when it is exposed, where it is exposed, and for how long it shall be exposed. For example, Defendant's dZine digital signage systems, including dZine's Content Creation Page Editor Software, allows creation and display of dynamic content, and dZine's IDS Server (e.g., DISplay Studio 5) allows for content distribution and scheduling. The content management software and IDS Server of the dZine digital signage systems allow for creation and determination of the content to be displayed, at which locations or displays to display the content, and when and how long the content is to be displayed at the locations. The IDS Server controls the players from a distance so content can be adjusted at any time and almost any place. An example of a dZine IDS device is the dZine Graphic Terminal ("GT"), which purports to be an intelligent monitor equipped with a Graphic Engine Board. The dZine GT purports to support high quality graphics and have various communication capabilities. Via a network, an IDS Server can display text, pictures, video and much more in a fact reliable way by means of an Ethernet, RS-232, or RS-485 connection.

107. Defendant's X2O Platform uses a control center for coordinating and controlling electronic displays, wherein the control center is able to create and update the exposure list in real time with control instruction fields via dynamic booking of information in time for exposure from mediators. For example, Defendant's X2O Platform includes a computerized control center with Internet connectivity that uses content management software to create and update content lists in real time and dynamically map, distribute, and schedule content to players.

108. Defendant's Alchemy Platform uses a control center for coordinating and controlling electronic displays, wherein the control center is able to create and update the exposure list in real time with control instruction fields via dynamic booking of information in time for exposure from mediators. For example, Defendant's Alchemy Platform incorporates a Web Commander and uses a computer to load, manage, and playback content on Defendant's projector in real time.

109. Defendant's dZine digital signage systems use a control center for coordinating and controlling electronic displays, wherein the control center is able to create and update the exposure list in real time with control instruction fields via dynamic booking of information in time for exposure from mediators. For example, Defendant's dZine digital signage systems include IDS Server, which allows users or mediators to control the players and display of content and update the parameters of scheduling dynamic content in real time. The content players can be adjusted at any time and at almost any place when using the IDS Server.

110. The exposure list of Defendant's X2O Platform enables each electronic display to be controlled, independently of other electronic displays, to receive the same or different information in accordance with the exposure list for exposure of respective electronic display. For example, Defendant's X2O Platform, including its content management software, controls each individual electronic display by mapping, distributing, and scheduling content to receive the same or different content, and allows users to communicate relevant messages to the right person, at the right time, and on the right device. The X2O Remote Manager of the X2O Platform enables users to monitor the status of specific screens or an entire network across multiple locations.

111. The exposure list of Defendant's Alchemy Platform enables each electronic display to be controlled, independently of other electronic display and to receive the same or different information in accordance with the exposure list for exposure of respective electronic display. For example, the Web Commander of the Alchemy Platform allows control of each projector such that the projector can receive the same or different information in accordance with the programmed content.

112. The exposure list of Defendant's dZine digital signage systems enable each electronic display to be controlled, independently of other electronic displays, to receive the same or different information in accordance with the exposure list for exposure of respective electronic display. For example, Defendant's IDS Server allows switching the displays on/off for content so that each DISplayer may be controlled independently of the other, and allows for scheduling of

content on individual or groups of screens remotely—thus allowing the same or different information to be exposed at different electronic displays.

113. In violation of 35 U.S.C. § 271, Defendant has directly infringed and continues to directly infringe, literally or under the doctrine of equivalents, one or more claims of the '334 Patent by making, using, offering for sale, selling, or importing devices or systems, in this judicial district and elsewhere in the United States (directly or through intermediaries), that comprise a computerized control center means, where the control center has communication interfaces against; a computerized means for coordinating and controlling electronic displays; and an exposure handler means whereby the control center functions, in real time and through the medium of the exposure handler, to create and update an exposure list that has control instruction fields, via dynamic booking of display information from mediators and where the exposure list contains control instructions, that coordinate and control the electronic displays in question with respect to what shall be exposed, where it shall be exposed, when it shall be exposed, and for how long it shall be exposed, and enables each electronic display, independently of other electronic displays, to receive the same or different information according to the exposure list for exposure or display by the respective electronic display as claimed in at least claim 32 of the '334 Patent, without the authority of T-Rex Property AB.

114. More specifically, Defendant's instrumentalities that infringe claim 32 of the '334 Patent include, by way of example only, *inter alia*, Defendant's X2O Platform, Alchemy Platform, and dZine digital signage systems, which coordinate and control electronic displays.

115. Defendant's X2O Platform comprises a computerized control center means where the control center has a communication interface and computerized means for coordinating and controlling electronic displays. For example, Defendant's X2O Platform comprises a networked computer that runs content management software for remotely coordinating and controlling (*e.g.*, mapping, scheduling, and distributing) the content on electronic displays.

116. Defendant's Alchemy Platform comprises a computerized control center means where the control center has a communication interface and computerized means for coordinating

and controlling electronic displays. For example, Defendant's Alchemy Platform comprises a networked computer that runs Web Commander and content management software for coordinating, controlling, loading, managing, and scheduling content to Defendant's projectors.

117. Defendant's dZine digital signage systems comprise a computerized control center means where the control center has a communication interface and computerized means for coordinating and controlling electronic displays. For example, Defendant's dZine digital signage systems include a networked computer with a communication interface, IDS Server, and content management software for controlling and coordinating the display of content to individual or groups of screens.

118. Defendant's X2O Platform further comprises exposure handler means whereby the control center functions, in real time and through the medium of the exposure handler, to create and update an exposure list that has control instruction fields, via dynamic booking of display information from mediators. For example, Defendant's X2O Platform includes a computerized control center with Internet connectivity that uses content management software to create and update content lists in real time and dynamically map, distribute, and schedule content.

119. Defendant's Alchemy Platform further comprises exposure handler means whereby the control center functions, in real time and through the medium of the exposure handler, to create and update an exposure list that has control instruction fields, via dynamic booking of display information from mediators. For example, Defendant's Alchemy Platform includes a computerized control center with Internet connectivity that uses Web Commander and content management software to create and update content lists in real time and dynamically map, distribute, and schedule content to Defendant's projectors.

120. Defendant's dZine digital signage systems comprise exposure handler means whereby the control center functions, in real time and through the medium of the exposure handler, to create and update an exposure list that has control instruction fields, via dynamic booking of display information from mediators. For example, Defendant's dZine digital signage systems include a computerized control center and networked computer that runs IDS Server and content

management software and allows for content distribution and scheduling. The content conveyed to the Displayer from the IDS Server can be modified dynamically after being received from mediators.

121. The exposure list of Defendant's X2O Platform contains control instructions, that coordinate and control the electronic displays in question with respect to what shall be exposed, where it shall be exposed, when it shall be exposed, and for how long it shall be exposed, and enables each electronic display, independently of other electronic displays, to receive the same or different information according to the exposure list for exposure or display by the respective electronic display. For example, Defendant's X2O Platform, generates a list with instructions that map, distribute, and schedule content for each electronic display and allows users to specify what content shall be displayed, when it shall be displayed, and for how long it shall be displayed. Defendant's X2O Platform controls each individual electronic display by mapping, distributing, and scheduling content to receive the same or difference content at players or displays.

122. The exposure list of Defendant's Alchemy Platform contains control instructions, that coordinate and control the electronic displays in question with respect to what shall be exposed, where it shall be exposed, when it shall be exposed, and for how long it shall be exposed, and enables each electronic display, independently of other electronic displays, to receive the same or different information according to the exposure list for exposure or display by the respective electronic display. For example, Defendant's Alchemy Platform, including its content management software, generates a list with instructions that map, distribute, and schedule content for electronic display, and allows user to specify what content shall be exposed, where it shall be exposed, when it shall be exposed, and for how long it shall be exposed. Defendant's Alchemy Platform controls each individual electronic display by mapping, distributing, and scheduling content to receive the same or difference content.

123. The exposure list of Defendant's dZine digital signage systems contain control instructions, that coordinate and control the electronic displays in question with respect to what shall be exposed, where it shall be exposed, when it shall be exposed, and for how long it shall be

exposed, and enables each electronic display, independently of other electronic displays, to receive the same or different information according to the exposure list for exposure or display by the respective electronic display. For example, the dZine digital signage systems' content management software and IDS Server allow for creation and determination of the content to be displayed, at which locations or displays to display the content, and when and how long the content is to be displayed at the locations. The content players can be adjusted at any time and at almost any place when using the IDS Server, and the IDS Server allows switching the displays on/off for content so that each DISplayer may be controlled independently of the other, and allows for scheduling of content on individual or groups of screens remotely.

124. Defendant has directly infringed and continues to directly infringe one or more claims of the '334 Patent, including at least claims 22 and 32, by operating its digital signage networks in Illinois and elsewhere in the United States.

125. Defendant has had knowledge of the '334 Patent since at least the date that this Complaint was served.

126. Because of Defendant's infringing activities, T-Rex Property AB has suffered damages and will continue to suffer damages in the future. T-Rex Property AB is entitled to recover from Defendant the damages sustained by T-Rex Property AB as a result of Defendant's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

**COUNT V – INDUCED INFRINGEMENT OF U.S. PATENT NO. 7,382,334**

127. The allegations set forth in the foregoing paragraphs 1 through 126 are hereby re-alleged and incorporated herein by reference.

128. In violation of 35 U.S.C. § 271(b), Defendant has induced and/or continues to induce its customers to use Defendant's digital signage networks in a manner to infringe at least claims 22 and 32 of the '334 Patent.

129. Defendant has induced infringement and/or continues to induce infringement of one or more claims of the '334 Patent, including at least claims 22 and 32, by marketing, promoting, soliciting, offering to sell, and selling its digital signage networks in Illinois and elsewhere in the United States that when used as intended and directed by Defendant, infringes at least claims 22 and 32 of the '334 Patent, either literally or under the doctrine of equivalents

130. Defendant's customers directly infringe claim 22 of the '334 Patent by performing each step of the claimed method when using Defendant's X2O Platform, Alchemy Platform, and dZine digital signage systems (in the same manner that Defendant directly infringes as described above).

131. Defendant's customers directly infringe claim 32 of the '334 Patent by placing the claimed system into service when using Defendant's X2O Platform, Alchemy Platform, and dZine digital signage systems (in the same manner that Defendant directly infringes as described above).

132. Defendant induces and/or has in the past induced its customers to infringe claims 22 and 32 of the '334 Patent by instructing its customers through advertisements, brochures, and manuals on how to use Defendant's digital signage networks in an infringing manner. For example, Defendant advertises and/or has advertised its digital signage systems on its website, touting "show the right message at the right time." *See* <https://www.barco.com/en/solutions/Digital-signage>.

133. Defendant provides and/or has provided training and support that teaches and instructs its customers on how to use its digital signage networks in an infringing manner. *See, e.g.,* <https://www.barco.com/en/Support>.

134. Defendant induces and/or has in the past induced its customers to coordinate and control electronic displays by using its digital signage networks that employ Barco's networked solutions products and digital signage platform, including its X2O Platform, Alchemy Platform, and dZine digital signage systems.

135. Defendant has in the past and/or continues to make, use, and sell the infringing instrumentalities and has in the past and/or continues to encourage others to infringe.

136. Defendant has had knowledge of the '334 Patent since at least the date that the original Complaint was served.

137. Defendant has specific intent to induce infringement of the '334 Patent since at least the date that the original Complaint was served.

138. Defendant was willfully blind to, knew, or should have known its actions would induce infringement since at least the date that the original Complaint was served.

139. Defendant's infringement has injured and will continue to injure Plaintiff and Plaintiff is entitled to recover damages adequate to compensate it for Defendant's infringement, which in no event can be less than a reasonable royalty.

140. Plaintiff is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, 284, and 287.

**COUNT VI – CONTRIBUTORY INFRINGEMENT OF U.S. PATENT NO. 7,382,334**

141. The allegations set forth in the foregoing paragraphs 1 through 140 are hereby alleged and incorporated herein by reference.

142. In violation of 35 U.S.C. § 271(c), Defendant has contributed to and continues to contribute to infringement of at least claims 22 and 32 of the '334 Patent.

143. Defendant has contributed to infringement and continues to contribute to infringement by selling, offering to sell, or importing its digital media players (*e.g.*, MPP-1 or MPU-1).

144. Defendant directly infringes at least claims 22 and 32 of the '334 Patent and its customers directly infringe by using Defendant's digital signage networks (as described above).

145. Defendant's digital media players are a material part of its digital signage networks and the infringement of at least claims 22 and 32 of the '334 Patent. Defendant's digital media players "ensure 24/7 reliability" of providing dynamic content and enable its customers to

“engage passers-by via personalized, interactive messaging.” For example, Defendant’s MPP-1 media player allows for “multi-video payout, video stream decoding and networked video synchronization, complex multi-zone dynamic content rendering, quick real-time data as well as reliable audience-based interactivity.” <https://www.barco.com/en/Products/Digital-signage/Digital-media-players/High-performance-digital-signage-player.aspx>. Defendant’s MPU-1 media player allows for “single, dual or multi-head digital video outlets” and real-time display of data. <https://www.barco.com/en/Specsheets/4e07e8e3-337e-4cc4-a7a0-0c1c6540ce35/MPU-1.pdf>. Defendant’s media players that provide digital media payout permit the coordinating and controlling of electronic displays, which constitutes a material part of the infringement of at least claims 22 and 32 of the ’334 Patent.

146. Defendant’s digital media players have no substantial, noninfringing uses. Defendant’s digital media players, including its MPU-1 and MPP-1 media players, have no use and do not work except in conjunction with Defendant’s X2O Premium “target signage solution” and content management software, which comprise Defendant’s infringing digital signage networks.

147. Defendant’s media players have no commercial use except in connection with Defendant’s infringing digital signage networks and claims 22 and 32 of the ’334 Patent. Defendant sells and offers to sell its media players only in conjunction with the use of its infringing digital signage networks.

148. Defendant was willfully blind, should have known, or knew use of its digital media players were made or especially adapted for use in infringement of at least claims 22 and 32 of the ’334 Patent since at least the date the original Complaint was served.

149. Defendant continues to make, use, sell, import, and/or offer to sell its digital media players and continues to contribute to infringement of at least claims 22 and 32 of the ’344 Patent.

150. Defendant was willfully blind to, knew, or should have known its actions would contribute to infringement since at least the date that the original Complaint was served.

151. Defendant's infringement has injured and will continue to injure Plaintiff and Plaintiff is entitled to recover damages adequate to compensate it for Defendant's infringement, which in no event can be less than a reasonable royalty.

152. Plaintiff is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, 284, and 287.

**COUNT VII – DIRECT INFRINGEMENT OF U.S. PATENT NO. 6,430,603**

153. The allegations set forth in the foregoing paragraphs 1 through 152 are hereby re-alleged and incorporated herein by reference.

154. In violation of 35 U.S.C. § 271, Defendant has directly infringed and continues to directly infringe, literally or under the doctrine of equivalents, one or more claims of the '603 Patent by making, using, offering for sale, selling, or importing devices or systems, in this judicial district and elsewhere in the United States (directly or through intermediaries), that perform the steps of scheduling the presentation of video or still-image content at selected time slots on selected electronic displays, that are provided at various geographic locations and interconnected by a network, receiving video or still-image content from a content provider, communicating scheduled content to respective server devices associated with corresponding selected electronic displays and initiating display of the content at selected times on corresponding selected electronic displays of the network, where split screen images can be displayed as claimed in at least claims 13, 42, and 43 of the '603 Patent, without the authority of T-Rex Property AB.

155. More specifically, Defendant's instrumentalities that infringe claims 13, 42, and 43 of the '603 Patent include, by way of example only, *inter alia*, Defendant's digital signage networks, including, for example, its X2O Platform and dZine digital signage systems, which present video or still-image content at selected times and locations on a networked connection of multiple electronic displays.

156. Defendant's X2O Platform comprises a network that interconnects a plurality of electronic displays that are provided at various geographic locations. For example, Defendant's

X2O Platform, including its content management software, creates and distributes attractive content and can be used for small (less than 5 display) as well as large (up to 1000 displays) installations. The X2O Platform, as dictated by the user, publishes information to multiple devices, including digital signage screen, video walls, interactive kiosks and mobile devices and can be used to distribute content through numerous channels throughout an entire organization.

157. Defendant's dZine digital signage systems comprise a network that interconnects a plurality of electronic displays that are provided at various geographic locations. For example, the dZine devices, including, for example, DISplayers, electronic displays, and computers running content management software, are connected via a network. The network allows for interconnection of multiple electronic displays at various locations, including installations of less than 5 displays or greater than 1000 displays.

158. Defendant's X2O Platform further comprises a means for scheduling the presentation of video or still-image content at selected time slots on selected electronic displays, which are part of the network, and receiving video or still-image content from a content provider. For example, Defendant's X2O Platform includes content management software for scheduling and distributing the presentation of content on selected displays at selected times and receives content images and instructions from users inside and/or outside of its customer's organization. The drag and drop functionality and user interfaces incorporated into the X2O Platform allows for ease of scheduling, planning, and reviewing different forms of content, including, for example, video or still-image content.

159. Defendant's dZine digital signage systems comprise a means for scheduling the presentation of video or still-image content at selected time slots on selected electronic displays, which are part of the network, and receiving video or still-image content from a content provider. For example, the content management software of the dZine digital signage systems provide the capability of running different content at different time slots on selected electronic displays. The IDS Server can manage the DISplayer and can schedule content on individual screens or groups of screens all being remotely managed from one application. Likewise, the Page Editor allows

content providers to create dynamic content, including, for example, text, images, or videos, which will display on electronic displays.

160. Defendant's X2O Platform further comprises transmission means in communication with the receiving means for communicating scheduled content to respective server devices that are associated with corresponding selected electronic displays, where each associated device initiates display of the video or still image content at selected times on a corresponding selected electronic display of said network. For example, Defendant's X2O Player and media players are connected and associated with corresponding electronic displays to initiate the display of content, including video or still image content, at scheduled times on displays of the network. *See, e.g.,* <https://www.barco.com/en/Products/Digital-signage> (discussing Defendant's digital signage and media players).

161. Defendant's dZine digital signage systems comprise transmission means in communication with the receiving means for communicating scheduled content to respective server devices that are associated with corresponding selected electronic displays, where each associated device initiates display of the video or still image content at selected times on a corresponding selected electronic display of said network. For example, the dZine digital signage systems transmit and communicate information between the IDS Server and DISplayer for sending dynamic content at the scheduled time to electronic displays. The DISplayers are associated with selected electronic displays, and are a robust and reliable tool for initiating and displaying scheduled video, text, or images, among other things, on any type of display selected by the user.

162. Defendant's X2O Platform further comprises means for enabling split screen images to be displayed at the electronic display. For example, Defendant's LCD video wall displays video content on one section of the screen and still image content on another section of the screen. *See, e.g.,* <https://www.barco.com/en/Products/Video-walls/LCD-Video-walls/Instant-VideoWall/Complete-video-wall-solution-in-one-package.aspx> (depicting Defendant's "Instant VideoWall" with video and still image content). Also, the X2O Platform

allows display of a multitude of media types, including video, graphics, charts, images, social media content, PowerPoint slides or a combination of these, on a single display.

163. Defendant's dZine digital signage systems comprise means for enabling split screen images to be displayed at the electronic display. For example, dZine's easy-to-handle Page Editor allows a user to create attractive and dynamic content for the display system, including text, images, or videos, among other things, and includes a drag and drop grid function where content can be easily positioned on the canvas of the screen to be displayed at the electronic display.

164. Further, the split screen capability of Defendant's X2O Platform is utilized to present a still image portion of the image in one display area, and one of real time video, near real time video, or still frame in a second display area. *See, e.g.,* <https://www.barco.com/en/Products/Video-walls/LCD-Video-walls/Instant-VideoWall/Complete-video-wall-solution-in-one-package.aspx> (depicting Defendant's "Instant VideoWall" with video and still image content). Also, the X2O Platform allows display of a multitude of media types, including video, graphics, charts, images, social media content, PowerPoint slides or any combination of these, on a single display.

165. Further, the split screen capability of Defendant's dZine digital signage systems is utilized to present a still image portion of the image in one display area, and one of real time video, near real time video, or still frame in a second display area. For example, the dZine's easy-to-handle Page Editor incorporates a grid function for users to display images in one display area of the screen, and one real time or near real time video, web feed, flash object in a second display area.

166. Defendant has directly infringed and continues to directly infringe one or more claims of the '603 Patent, including at least claims 42 and 43, by operating its digital signage networks in Illinois and elsewhere in the United States.

167. Defendant has had knowledge of the '603 Patent since at least the date that this Complaint was served.

168. Because of Defendant's infringing activities, T-Rex Property AB has suffered damages and will continue to suffer damages in the future. T-Rex Property AB is entitled to recover from Defendant the damages sustained by T-Rex Property AB as a result of Defendant's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

**COUNT VIII – INDUCED INFRINGEMENT OF U.S. PATENT NO. 6,430,603**

169. The allegations set forth in the foregoing paragraphs 1 through 168 are hereby re-alleged and incorporated herein by reference.

170. In violation of 35 U.S.C. § 271(b), Defendant has induced and/or continues to induce its customers to use Defendant's digital signage networks in a manner to infringe at least claims 42 and 43 of the '603 Patent. *See, e.g.*, <https://www.barco.com/en/Products/Digital-signage> (providing information on Defendant's digital signage networks and technology).

171. Defendant has induced infringement and/or continues to induce infringement of one or more claims of the '603 Patent, including at least claims 42 and 43, by marketing, promoting, soliciting, offering to sell, and selling its digital signage networks in Illinois and elsewhere in the United States that when used as intended and directed by Defendant, infringes at least claims 42 and 43 of the '603 Patent, either literally or under the doctrine of equivalents.

172. For example, Defendant's customers directly infringe claims 42 and 43 of the '603 Patent when using Defendant's digital signage networks (in the same manner that Defendant directly infringes as described above).

173. Defendant induces and/or has induced its customers to infringe claims 42 and 43 of the '603 Patent by instructing its customers through advertisements, brochures, and manuals on how to use Defendant's digital signage networks in an infringing manner. For example, Defendant advertises its digital signage systems on its website, touting "show the right message at the right time." *See*, <https://www.barco.com/en/solutions/Digital-signage>.

174. Defendant provides and/or has provided training and support that teaches and instructs its customers on how to use its digital signage networks in an infringing manner. *See, e.g.*, <https://www.barco.com/en/Support>.

175. Defendant induces and/or has induced its customers to present video or still-image content at selected times and locations by using its X2O Platform, Alchemy Platform, and dZine digital signage systems, that employ Barco's networked solutions products and digital signage platform, including its digital displays, digital media players, and content management software.

176. Defendant has in the past and/or continues to make, use, and sell the infringing instrumentalities and continues to encourage others to infringe.

177. Defendant has had knowledge of the '603 Patent since at least the date that the original Complaint was served.

178. Defendant has specific intent to induce infringement of the '603 Patent since at least the date that the original Complaint was served.

179. Defendant was willfully blind to, knew, or should have known its actions would induce infringement since at least the date that the original Complaint was served.

180. Defendant's infringement has injured and will continue to injure Plaintiff and Plaintiff is entitled to recover damages adequate to compensate if for Defendant's infringement, which in no event can be less than a reasonable royalty.

181. Plaintiff is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, 284, and 287.

#### **COUNT IX – CONTRIBUTORY INFRINGEMENT OF U.S. PATENT NO. 6,430,603**

182. The allegations set forth in the foregoing paragraphs 1 through 181 are hereby alleged and incorporated herein by reference.

183. In violation of 35 U.S.C. § 271(c), Defendant has contributed to and continues to contribute to infringement of at least claims 42 and 43 of the '603 Patent.

184. Defendant has contributed to infringement and continues to contribute to infringement by selling, offering to sell, or importing its digital media players (*e.g.*, MPP-1 or MPU-1).

185. Defendant directly infringes at least claims 42 and 43 of the '603 Patent and its customers directly infringe by using Defendant's digital signage networks (as described above).

186. Defendant's digital media players are a material part of its digital signage network and the infringement of at least claims 42 and 43 of the '603 Patent. Defendant's digital media players "ensure 24/7 reliability" of providing dynamic content and enable its customers to "engage passers-by via personalized, interactive messaging." For example, Defendant's MPP-1 media player allows for "multi-video payout, video stream decoding and networked video synchronization, complex multi-zone dynamic content rendering, quick real-time data as well as reliable audience-based interactivity." <https://www.barco.com/en/Products/Digital-signage/Digital-media-players/High-performance-digital-signage-player.aspx>. Defendant's MPU-1 media player allows for "single, dual or multi-head digital video outlets" and real-time display of data. <https://www.barco.com/en/Specsheets/4e07e8e3-337e-4cc4-a7a0-0c1c6540ce35/MPU-1.pdf>. Defendant's media players that provide digital media payout permit the presentment of video or still-image content at selected times and locations, which constitutes a material part of the infringement of at least claims 42 and 43 of the '603 Patent.

187. Defendant's digital media players have no substantial, noninfringing uses. Defendant's digital media players, including its MPU-1 and MPP-1 media players, have no use and do not work except in conjunction with Defendant's X2O Premium "target signage solution" and content management software, which comprise Defendant's infringing digital signage networks.

188. Defendant's media players have no commercial use except in connection with Defendant's infringing digital signage networks and the claims 42 and 43 of the '603 Patent. Defendant sells and offers to sell its media players only in conjunction with the use of its infringing digital signage networks.

189. Defendant was willfully blind, should have known, or knew use of its digital media players were made or especially adapted for use in infringement of at least claims 42 and 43 of the '603 Patent since at least the date the original Complaint was served.

190. Defendant continues to make, use, sell, offer to sell, and/or import its digital media players and continues to contribute to infringement of at least claims 42 and 43 of the '603 Patent.

191. Defendant was willfully blind to, knew, or should have known its actions would contribute to infringement since at least the date that the original Complaint was served.

192. Defendant's infringement has injured and will continue to injure Plaintiff and Plaintiff is entitled to recover damages adequate to compensate it for Defendant's infringement, which in no event can be less than a reasonable royalty.

193. Plaintiff is entitled to damages in accordance with 35 U.S.C. §§ 271, 281, 284, and 287.

### **JURY DEMAND**

Plaintiff T-Rex Property AB hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

### **PRAYER FOR RELIEF**

Plaintiff T-Rex Property AB respectfully requests that the Court find in its favor and against Defendant, and that the Court grant Plaintiff the following relief:

A. an adjudication that Defendant has directly infringed the '470 Patent, the '334 Patent, and the '603 Patent;

B. an adjudication that Defendant has induced infringement of the '470 Patent, the '334 Patent, and the '603 Patent;

C. an adjudication that Defendant has contributorily infringed the '470 Patent, the '334 Patent, and the '603 Patent;

D. an award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant's past infringement of the '470 Patent, the '334 Patent, and the '603 Patent and any continuing or future infringement through the date such judgment is entered, including prejudgment and post-judgment interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

E. an injunction ordering Defendant to pay an ongoing royalty in an amount to be determined for any continued infringement after the date judgment is entered; and,

F. an award to Plaintiff of such further relief at law or in equity as the Court deems just and proper, including, but not limited to costs, fees, expenses, interest, and/or attorneys' fees.

Dated: September 28, 2017

Respectfully submitted,

*/s/ William C. Spence*

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*T-Rex Property AB*

**CERTIFICATE OF SERVICE**

I hereby certify that on September 28, 2017, I caused the foregoing document to be electronically filed with the Clerk of the Court using the CM/ECF system, which will send notification of such filing via electronic mail to all counsel of record.

/s/ Jacob R. Graham  
Jacob R. Graham