

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MINNESOTA**

T-REX PROPERTY AB,

Plaintiff,

v.

CEDAR FAIR, L.P.,

Defendant.

Civil Action No.: 0:16-cv-2018

JURY TRIAL DEMANDED

PLAINTIFF'S COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff T-Rex Property AB, by and through its undersigned counsel, files this Complaint against Defendant Cedar Fair, L.P. 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 Cedar Fair, L.P. is a publicly traded Delaware limited partnership with its principal executive offices located at One Cedar Point Drive, Sandusky, Ohio 44870 and has Corporation Service Company, 2345 Rice Street, Suite 230, Roseville, MN 55113, as its registered agent.

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 has systematic and continuous contacts with Minnesota and this judicial district because Defendant regularly transacts business in the State of Minnesota and in this judicial district, because it has one of its amusement parks located in this judicial district, it has thereby purposefully availed itself of the benefits and protections of the laws of the State of Minnesota. Furthermore, this Court has personal jurisdiction over Defendant because, as described further below, Defendant has committed acts of patent infringement giving rise to this action within the State of Minnesota and this judicial district 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.

8. On January 16, 2007, U.S. Patent Number RE39,470, 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 described by 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; 6:25-29.) “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.)

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.)

14. Multiple benefits flow from the implementation of certain embodiments of the innovations described by the '470 Patent, such as controlling and coordinating digital signage displays dynamically—beyond merely scheduling content to be displayed on remote screens. Other benefits include permitting an advertiser to monitor the results of an ad campaign, and in response to those results, to dynamically alter the presented ad message as part of a feedback loop. This also enables an advertiser to gather important data for creating the next ad campaign, or the next iteration of the ad campaign. The innovations described by the '470 Patent thus function differently from traditional or conventional methods of operation for digital signage.

15. 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.

16. 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.)

17. 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.)

18. 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.*)

19. 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.)

20. Multiple benefits flow from the implementation of certain embodiments of the innovations described by the '334 Patent, such as controlling and coordinating digital signage

displays dynamically—beyond merely scheduling content to be displayed on remote screens. Other benefits include permitting an advertiser to monitor the results of an ad campaign, and in response to those results, to dynamically alter the presented ad message as part of a feedback loop. This also enables an advertiser to gather important data for creating the next ad campaign, or the next iteration of the ad campaign. The innovations described by the '334 Patent thus function differently from traditional or conventional methods of operation for digital signage.

21. 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.

22. 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.)

23. A system operating according to an embodiment of the '603 Patent can include “a central information processing center,” a network of “high resolution electronic displays located in high traffic areas.” (*Id.* at 2:7; 1:15-16.) “The electronic displays preferably are large (e.g., 23×33½ ft.) flat LED displays that are driven by their own video or image servers. (*Id.* at 2:16-18.) “In preferred embodiments, each display is a . . . high resolution, full color display that provides brilliant light emission from a flat panel screen.” (*Id.* at 2:62-65.) “Commercial advertisers” can “directly send their own advertisements electronically to the network to be displayed at locations and times selected by the advertiser.” (*Id.* at 1:12-18.)

24. 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.)

25. In one embodiment, a display “takes the form of a 23 feet by 33½ feet seamless flat screen display including multiple flat panel display modules.” (*Id.* at 4:49-51.) “The panels utilize advanced semiconductor technology to provide high resolution, full color images utilizing light emitting diodes” that can provide “a high spatial resolution” that is “easily viewable in bright sunlight.” (*Id.* at 4:51-53, 62-65.) In such a display device, LEDs can be “aligned in an integrated array with each pixel having a red, green and blue LED” and that if each “red, green and blue emitter is accessed with 24 bit resolution” the resulting display “provid[es] 16.7 million colors for every pixel” “produc[ing] the desired light output.” (*Id.* at 4:54-65.)

26. T-Rex is the assignee and owner of the right, title and interest in and to the ’470, the ’334 and the ’603 Patents (henceforth 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.

COUNT I – INFRINGEMENT OF U.S. Patent No. RE39,470

27. The allegations set forth in the foregoing paragraphs 1 through 26 are hereby re-alleged and incorporated herein by reference.

28. Upon information and belief, in violation of 35 U.S.C. § 271(a), 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 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 T-Rex.

29. Upon information and belief, in violation of 35 U.S.C. § 271(a), 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 T-Rex.

30. More specifically, the infringing devices and systems include Defendant's FunTV network of digital screens that are located throughout the guest areas of its amusement parks, including ride and restaurant queues and in high traffic areas.

31. Upon information and belief, 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

operating its FunTV network of digital screens in its amusement park located this judicial district, and in its amusement parks located throughout the United States.

32. 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 32). Mats Hylin, the first named inventor of the ’470 and the ’334 Patents, 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. Mr. Hylin also recognized that in order “to increase the revenue from” the “most attractiv[ely situated] billboards,” an approach that extended beyond merely increasing the rates was required. *Id.* In addition to addressing these revenue issues, distribution efficiencies was “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.

33. More particularly, 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 33). 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 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.*

34. Claim 25 thus expresses certain innovations that are directed to specific implementations of solutions to problems that existed in software that controls digital signage displays. For example, prior to the ’470 Patent, advertisers wanted more flexibility in the display and control of digital signs as well as an increase in the speed of such controls. Advertisers also wanted the ability to dynamically change the message, rather than display the same advertisement during a fixed period. These demands from advertisers were not being met prior to the ’470 Patent.

35. 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.

36. The innovations embodied in claim 25 thus improved the then-existing technological process for controlling electronic displays. These improvements include: (i) an electronic display where an external information mediator can be enabled to dynamically control, in real time, the transmission of display instructions; (ii) displays that can be updated in response to changes in, for example, external conditions and/or information and where such updates can be controlled by an external information mediator; and (iii) an overall display control process that incorporated fundamental flexibility of operation.

37. 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.

38. “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.*

39. 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.

40. The inventions embodied in claim 26 also “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.

41. Claim 26 thus expresses certain innovations that are directed to specific systems implementation of solutions to problems that existed in the software that controls digital signage displays. For example, prior to the ’470 Patent, advertisers wanted more flexibility in the display and control of digital signs as well as an increase in the speed of such controls. Advertisers also wanted the ability to dynamically change the message, rather than display the same

advertisement during a fixed period. These demands from advertisers were not being met prior to the '470 Patent.

42. 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.

43. The innovations embodied in claim 26 thus improved the then-existing systems for controlling electronic displays. These improvements include: (i) an electronic display control system where an external information mediator can be enabled to dynamically control, in real time, the transmission of display instructions; (ii) devices that can be updated in response to changes in, for example, external conditions and/or information and where such updates can be controlled by an external information mediator in order to change the information being displayed; and (iii) an overall system that incorporated fundamental flexibility of operation.

44. 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.

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

46. Because of Defendant's infringing activities, T-Rex has suffered damages and will continue to suffer damages in the future. T-Rex is entitled to recover from Defendant the damages sustained by T-Rex 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 – INFRINGEMENT OF U.S. Patent No. 7,382,334

47. The allegations set forth in the foregoing paragraphs 1 through 46 are hereby re-alleged and incorporated herein by reference.

48. Upon information and belief, in violation of 35 U.S.C. § 271(a), 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 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.

49. Upon information and belief, in violation of 35 U.S.C. § 271(a), 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.

50. More specifically, the infringing devices and systems include Defendant's FunTV network of digital screens that are located throughout the guest areas of its amusement parks, including ride and restaurant queues and in high traffic areas.

51. Upon information and belief, 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 FunTV network of digital screens in its amusement park located this judicial district, and in its amusement parks located throughout the United States.

52. 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.*

53. Claim 22 thus expresses certain innovations that are directed to specific implementations of solutions to problems that existed in software that controls digital signage displays. For example, prior to the ’334 Patent, advertisers wanted more flexibility in the display and control of digital signs as well as an increase in the speed of such controls. Advertisers also wanted the ability to dynamically change the message, rather than display the same advertisement during a fixed period. These demands from advertisers were not being met prior to the ’334 Patent.

54. 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.

55. The innovations embodied in claim 22 thus improved the then-existing technological process for controlling electronic displays. These improvements include: (i) an electronic display where an external information mediator can be enabled to dynamically control, in real time, the transmission of display instructions; (ii) displays that can be updated in response to changes in, for example, external conditions and/or information and where such updates can be controlled by an external information mediator; and (iii) an overall display control process that incorporated fundamental flexibility of operation.

56. 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.

57. “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.*

58. 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.

59. 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.

60. Claim 32 thus expresses certain innovations that are directed to specific systems implementation of solutions to problems that existed in the software that controls digital signage displays. For example, prior to the ’334 Patent, advertisers wanted more flexibility in the display and control of digital signs as well as an increase in the speed of such controls. Advertisers also wanted the ability to dynamically change the message, rather than display the same advertisement during a fixed period. These demands from advertisers were not being met prior to the ’334 Patent.

61. 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.

62. The innovations embodied in claim 32 thus improved the then-existing systems for controlling electronic displays. These improvements include: (i) an electronic display control system where an external information mediator can be enabled to dynamically control, in real time, the transmission of display instructions; (ii) devices that can be updated in response to changes in, for example, external conditions and/or information and where such updates can be controlled by an external information mediator in order to change the information being displayed; and (iii) an overall system that incorporated fundamental flexibility of operation.

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

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

65. Because of Defendant’s infringing activities, T-Rex has suffered damages and will continue to suffer damages in the future. T-Rex is entitled to recover from Defendant the damages sustained by T-Rex 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 III – INFRINGEMENT OF U.S. Patent No. 6,430,603

66. The allegations set forth in the foregoing paragraphs 1 through 65 are hereby re-alleged and incorporated herein by reference.

67. Upon information and belief, in violation of 35 U.S.C. § 271(a), 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 42 and 43 of the '603 Patent, without the authority of T-Rex.

68. More specifically, the infringing devices and systems include Defendant's FunTV network of digital screens that are located throughout the guest areas of its amusement parks, including ride and restaurant queues and in high traffic areas.

69. Upon information and belief, 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 FunTV network of digital screens in its amusement park located this judicial district, and in its amusement parks located throughout the United States.

70. 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.

71. "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.

72. “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.

73. 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.

74. 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.*

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

76. Because of Defendant’s infringing activities, T-Rex has suffered damages and will continue to suffer damages in the future. T-Rex is entitled to recover from Defendant the damages sustained by T-Rex 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.

JURY DEMAND

Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

Plaintiff 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 infringed the '470, the '334 and the '603 Patents;
- B. an award of damages to be paid by Defendant adequate to compensate T-Rex for Defendant's past infringement of the '470, the '334 and the '603 Patents 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;
- C. 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,
- D. an award to T-Rex 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: June 20, 2016

Respectfully submitted,

/s/ David P. Swenson

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