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Attorneys for Plaintiff Simio, LLC

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF UTAH, CENTRAL DIVISION

Simio, LLC, Plaintiff, vs. **FlexSim Software Products, Inc.**, Defendant.	**COMPLAINT FOR PATENT INFRINGEMENT** **JURY TRIAL DEMANDED** Case No. U.S. District Court Judge

COMPLAINT FOR PATENT INFRINGEMENT

Simio, LLC ("Simio LLC" or "Plaintiff"), by its undersigned counsel, respectfully sets forth its Complaint against Defendant FlexSim Software Products, Inc. ("FlexSim Software Products, Inc." or "Defendant") stating as follows:

THE PARTIES

1.   Plaintiff Simio, LLC is a Delaware limited liability company with a place of business at 504 Beaver Street, Sewickley, Pennsylvania 15143. Plaintiff's business consists primarily of the creating, marketing and selling of simulation software and providing simulation modeling services.

2.   Defendant FlexSim Software Product, Inc. is a Utah corporation with its headquarters in Orem, Utah.

JURISDICTION AND VENUE

3.   This Complaint alleges patent infringement under 35 U.S.C. § 271.

4.   This Court has subject matter jurisdiction for patent claims pursuant to 28 U.S.C. §§ 1331 and 1338.

5.   The Court has personal jurisdiction over Defendant because Defendant has established minimum contacts with this forum by establishing its headquarters in, and otherwise purposely availing itself of the laws and benefits of, this forum, and the exercise of jurisdiction over the Defendant would not offend traditional notions of fair play and substantial justice.

6.   Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391 (b) and (c) and/or 1400, because Defendant is subject to personal jurisdiction in this judicial district.

FACTUAL ALLEGATIONS

7.   Simio is the owner of United States Patent No. 8,156,468 B22 (the "'468 Patent"), entitled System and Method for Creating Intelligent Simulation Objects Using Graphical Process Descriptions, and issued on April 10, 2012.   A true and correct copy of the '468 Patent is attached hereto as Exhibit "A."

8.   The '468 Patent relates generally to an object-oriented, computer-based system for developing simulation models. The system comprises one or more base objects and one or more graphical processes, wherein new objects are created from base objects by a user assigning one or more graphical processes to the base object(s). New objects are created without the need for methods or computer programming. A model is built by creating objects that represent the physical components of the system being modeled into the model, and then running the model.

9.   Independent Claim 1 of the '468 Patent is addressed to a computer-based system for developing simulation models on a physical computing device, and Claims 2-13 depend directly or indirectly upon Claim 1.

10.   Independent Claim 1 of the '468 Patent claims:

A computer-based system for developing simulation models on a physical computing device, the system comprising:

one or more graphical processes;

one or more base objects created from the one or more graphical processes,

wherein a new object is created from a base object of the one or more base objects by a user by assigning the one or more graphical processes to the base object of the one or more base objects;

wherein the new object is implemented in a 3-tier structure comprising:

an object definition, wherein the object definition includes a behavior,

one or more object instances related to the object definition, and

one or more object realizations related to the one or more object instances;

wherein the behavior of the object definition is shared by the one or more object instances and the one or more object realizations; and

an executable process to add a new behavior directly to an object instance of the one or more object instances without changing the object definition and the added new behavior is executed only for that one instance of the object.

11.   Defendant FlexSim is currently making, offering for sale and/or selling in the United States simulation software known as FlexSim 2016, and will continue to do so unless enjoined by this Court.

12.   FlexSim launched FlexSim 2016 as a product and service that described as "Next generation simulation modeling with Process Flow."   *See* https://www.FlexSim.com/next-generation-simulation-modeling-process-flow/ (a true and correct copy of the web site is attached hereto as Exhibit "B").

13.   Simio's attention was drawn to FlexSim 2016 by FlexSim's description that its new product "replaces nearly all computer code with a flowchart." FlexSim further describes a "revolutionary" new product that uses "process flow" to avoid programming and thereby simplify the simulation process. *See* Exhibit "B" hereto. In short, FlexSim not only copied the Simio invention, but also FlexSim adopted the same marketing approach of promoting inventive change for simulation. Simio's subsequent investigation revealed that FlexSim has infringed the '468 Patent, and Simio provided notice of this infringement to FlexSim in July 2016.

14.   More specifically, Defendant FlexSim was on notice of a patent infringement allegation by Simio in respect to the '468 Patent no later thans July 8, 2016, when legal counsel for Simio notified William Nordgren, CEO of FlexSim, of the '468 Patent.

15.   Much earlier, however, Mr. Nordgren attended the 2011 Winter Simulation Conference, at which Dennis Pegden of Simio presented on its patented system and method and, as shown in one of the PowerPoint slides from the Simio Tutorial at the conference, specifically noted that the system and method was subject to a then-pending U.S. patent application, which later resulted in the '468 Patent.

16.   Defendant FlexSim responded to the July 8, 2016 notice by filing a complaint for declaratory judgment of non-infringement, invalidity and unenforceability in this Court, the United States District Court for the District of Utah, on July 20, 2016, *Case No. 2:16cv00820-TC* (the "Prior Utah Action").

17.   In response to the FlexSim Complaint in the Prior Utah Action, Simio filed a Motion to Dismiss, arguing that this Court lacked personal jurisdiction over Simio, that venue was improper and, finally, that FlexSim had failed to properly plead its various claims.

18.   In addition, Simio filed its own complaint for patent infringement in the United States District Court for the Western District of Pennsylvania on November 14, 2016 captioned *Simio, LLC v. FlexSim Software Products, Inc.*, at Civil Action No. 2:16-cv-01710-MRH (the "Pennsylvania Action").

19.   On March 15, 2017, this Court granted Simio's Motion to Dismiss, and FlexSim appealed the dismissal of the Prior Utah Action to the Federal Circuit on March 30, 2017 (the "Appeal").

20.   After first filing an Answer and Counterclaim in the Pennsylvania Action, FlexSim thereafter filed a Motion to Dismiss based on improper venue and primarily on the then-recent United States Supreme Court decision of *TC Heartland LLC v. Kraft Foods Grp. Brands LLC*, 137 S. Ct. 1514 (U.S. 2017) ("*Heartland*").

21.   After extensive briefing, on November 9, 2017, the United States District Court for the Western District of Pennsylvania dismissed the Pennsylvania Action without prejudice based on its finding that, *inter alia*, pursuant to *Heartland*, it did not have venue over the action.

22.   On January 3, 2018, after the issues presented on appeal were briefed, but before oral argument on FlexSim's Appeal, FlexSim filed a Request for Ex Parte Reexamination of Claims 1-13 of the Patent (the "Reexam Request").   By stipulation and joint motion of the parties, the appellate proceeding was stayed pending the reexamination proceeding.

23.   The reexamination proceeding recently concluded by notice dated September 21, 2018, whereby FlexSim's challenges to the '468 Patent were rejected, and Claims 1 – 13 of the '468 Patent have been confirmed without change or amendment. A true and correct copy of the *Ex Parte* Reexamination Certificate for the '468 Patent is attached hereto as Exhibit "C."

24.   Despite the July 8, 2016 notice of infringement and subsequent proceedings, Defendant FlexSim has continued to make FlexSim 2016 available for use in the United States and also has continued to offer FlexSim 2016 for sale and importation into the United States.

COUNT I

INFRINGEMENT OF THE '468 PATENT

25.   The preceding paragraphs of the Complaint are hereby incorporated by reference as though the same were fully set forth herein.

26.   Upon information and belief, Defendant's making, offering for sale and/or sale of FlexSim 2016 constitutes direct infringement of at least system claims 1, 2, 3, 6, 8, and 9 of the '468 Patent, literally or under the doctrine of equivalents, and violates 35 U.S.C. §271(a).

27.   More specifically, and upon information and belief, FlexSim 2016 includes all of the elements of Claim 1 of the '468 Patent (or equivalents thereto). In particular, FlexSim 2016

is computer-based system for developing simulation models on a physical computing device whereby, *inter alia*: (i) new objects are created from base objects by a user assigning one or more graphical processes to the base object(s); (ii) new objects are created without the need for methods or computer programming; and (iii) object instances are modified using process logic without modifying the object definition and without the need for computer programming.

28.   In response to the Simio notice of infringement in July 2016, FlexSim specifically questioned whether certain limitations in Claim 1 of the '468 Patent were present in FlexSim 2016.

29.   In particular, FlexSim questioned whether FlexSim 2016 includes the limitation in Claim 1 of "wherein a new object is created from a base object of the one or more base objects by a user by assigning the one or more graphical processes to the base object of the one or more base objects."   In response, and without limitation to further explanation as part of this proceeding, Simio indicated that this limitation is described at least at page 986 of the Flexsim User Guide for FlexSim's 2016 Process Flow Module, which describes how the FlexSim 2016 product allows a user to create a new object from a base object by adding processes:

> Fixed Resource - Choose this type of process flow if you want to
> create the brain of one or more fixed resource objects. You'd use
> this type of process flow if you want to create logic for custom FR
> objects or if you simply want a fixed resource to have additional
> functionality beyond the standard FlexSim logic for that object.

30.   In this context, the Fixed Resource ("FR") is a base class definition in the Flexsim product, and the product creates a new custom FR object from the base FR object to have additional functionality beyond the standard FlexSim logic. The FlexSim "brain" is the object definition.

31.   FlexSim also questioned whether FlexSim 2016 contains the limitation in Claim 1 of "one or more object realizations related to the one or more object instances." In response, and without limitation to further explanation as part of this proceeding, Simio indicated that this limitation is described at least at page 1079 of the FlexSim User Guide, wherein FlexSim states:

> In the Process Flow module, an instance is a single occurrence of a sub flow, fixed resource process flow, or task executer sub flow. Usually, you'll create one of these kinds of process flow to act as a basic template. When an object (such as a fixed resource or task executer) uses the process flow during a simulation run, it will become a separate instance of that process flow. For that reason, there might be multiple instances of the same process flow running at the same time during a simulation run.

32.   Simio further explained that, within object oriented frameworks, an object has three components: a static definition (behavior), static inputs, and dynamically changing state values. This is true across all object-oriented tools. There appears to be a slight difference in terminology between Flexsim's and Simio's terminology for describing these three components of objects.   Flexsim 2016 refers to the definition as the "brain", whereas Simio uses the word "definition."   Simio uses the word instance to mean static inputs, and realization to refer to the associated dynamic state information. Flexsim appears to use the word "instance" to mean both the static inputs and static property values, whereas the term 'labels' is used to define states that can change during the run.   In any case the dynamic information (realization) exists and is being held in memory allocated by the compiler for the state variables that are associated with the object instance. This is a necessary component to allow the object to change state over time. Regardless of the labels/packaging, each object has a definition, static inputs, and dynamic states.

33.   By way of further explanation, the FlexSim product has to have "realizations" – that is, the dynamic state information for an object.   Without dynamic state information, the FlexSim objects would be useless.

34.   This same description of FlexSim 2016 in the FlexSim User Guide also matches to the Claim 1 limitation "wherein the behavior of the object definition is shared by the one or more object instances and the one or more object realizations."

35.   Finally, FlexSim questioned whether FlexSim includes the Claim 1 limitation of "an executable process to add a new behavior directly to an object instance of the one or more object instances without changing the object definition and the added new behavior is executed only for that one instance of the object."   In response, and without limitation to further explanation as part of this proceeding, Simio indicated that this limitation is described at page 1013 of the FlexSim User Guide:

> Events are the most common way to link to a process flow from a
> simulation model. For example, you can set an activity in your
> process flow to listen for an item to enter a processor. Every time
> an item enters the processor, it would then kick off a series of
> activities that perform custom logic, perhaps to dynamically
> determine the processing time for that type of item. If you were not
> using a process flow to do this, you'd need to manually write code
> for the OnEntry trigger of the processor instead.

36.   Simio further explained that, in the FlexSim 2016 process, logic is added to an instance of an object by triggering the process to execute when an event is fired (exactly the same as described in the Simio patent). In the example listed above (page 1013 of the User Guide), the custom process is computing the processing time for the item at the object representing the processor. This is the same system functionality and approach described in the

Simio patent, down to the use of the same terminology, *i.e.*, "event", "process", "token", and "activity/task".

37.   Prior to introduction of FlexSim 2016, FlexSim distinguished its prior products from the Simio products, and FlexSim did not have a product that created new objects from base objects by assigning one or more graphical processes to a base object and without the need for computer programming, and did not have a product that allowed object instances to be modified using graphical process logic without modifying the object definition.

38.   Upon information and belief, Defendant's making, offering for sale and/or sale of FlexSim 2016, with instructions to use the claimed system in at least claims 1, 2, 3, 6, 8, and 9 of the '468 Patent induces infringement of the '468 Patent under 35 U.S.C. §271(b).

39.   When Defendant FlexSim has made and sold FlexSim 2016 and/or offered it for sale, FlexSim was and is aware of the '468 Patent and has known that use of FlexSim 2016 by users in the United States has and will constitute direct infringement of the '468 Patent.

40.   Upon information and belief, Defendant's making, offering for sale and/or sale of FlexSim 2016 , with instructions to use the claimed system in at least claims 1, 2, 3, 6, 8, and 9 of the '468 Patent are acts of contributory infringement of the '468 Patent under 35 U.S.C. §271(c).

41.   Defendant FlexSim has provided and sold FlexSim 2016 and/or offered it for sale to users in the United States intending that FlexSim 2016 would be used in the United States. Defendant FlexSim also has known that that use of FlexSim 2016 by users in the United States has and will constitute direct infringement of the '468 Patent.

42.   By reason of the foregoing, Plaintiff has been damaged and will continue to be damaged in an amount yet to be determined, and has suffered and will continue to suffer irreparable loss and harm.

43.   The activities of Defendant FlexSim complained of herein constitute willful and intentional infringement of the '468 Patent, are in total disregard of the rights of Simio, and were commenced and have continued in spite of FlexSim's knowledge that the manufacture, use, sale, and offer for sale of FlexSim 2016 were and are in the direct contravention of the rights of Simio.

44.   This action, therefore, is "exceptional" within the meaning of 35 U.S.C. § 285.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff requests that this court grant it equitable and other relief, and enter judgment that:

a.   Defendant is preliminarily and permanently enjoined from directly infringing the '468 Patent pursuant to 35 U.S.C. § 283, by sale and use of FlexSim 2016 or any similar device;

b.   Defendant is liable to Plaintiff for its direct, induced and contributory infringement and ordered to pay damages pursuant to 35 U.S.C. § 284 as a result of infringement of Plaintiff's '468 Patent, and all damages suffered by Plaintiff as a result of the infringement;

c.   This case is exceptional under 35 U.S.C. § 285;

d.   Plaintiff is entitled to a full accounting for and an award of damages for Defendant's infringement of the '468 Patent, including pre- and post-judgment interest;

e.   Plaintiff is awarded its attorneys' fees, expenses and costs pursuant to 35 U.S.C. §

284; and

f.   Plaintiff is awarded such further relief as the court may deem appropriate.

A JURY TRIAL IS DEMANDED

Date: October 30, 2018   Respectfully submitted,

                                                 By: /s/ *H. Dickson Burton*
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                                                 (*To Be Admitted Pro Hac Vice*)

                                                 ATTORNEYS FOR PLAINTIFF, SIMIO LLC