UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

KCG TECHNOLOGIES, LLC, Plaintiff, v. CARMAX AUTO SUPERSTORES, INC.; CARMAX FUNDING SERVICES, LLC; CARMAX FUNDING SERVICES II, LLC; CARMAX BUSINESS SERVICES, LLC, Defendants.	)	Civil No. 19-11101-LTS

MEMORANDUM AND ORDER ON MOTION TO DISMISS (DOC. NO. 13)

November 27, 2019

SOROKIN, J.

Plaintiff KCG Technologies LLC ("KCG") brings this patent infringement action alleging that CarMax Auto Superstores, Inc., CarMax Funding Services, LLC, CarMax Funding Services II, LLC, and CarMax Business Services, LLC ("CarMax") infringe "at least" claim 1 of U.S. Patent No. 9,671,955 ("the '955 patent"). Doc. No. 1; id. ¶ 28.[1] CarMax moves to dismiss the complaint on the grounds that the '955 patent is directed to patent-ineligible subject matter under 35 U.S.C. § 101, and on the grounds that KCG's allegations of direct, indirect, and willful infringement fail to meet the pleading requirements and therefore fail to state a claim for which relief can be granted. Doc. No. 13.

The parties fully briefed the issues (Doc. Nos. 13, 15, 18) and the Court heard oral argument on CarMax's motion on November 25, 2019 (Doc. No. 27). For the reasons that follow, the Court

[1] Citations to "Doc. No. __" reference documents appearing on the court's electronic docketing system; pincites are to the page numbers in the ECF header.

holds that the claims of the ’955 patent are directed to patent-ineligible subject matter under 35 U.S.C. § 101 and therefore GRANTS CarMax’s motion to dismiss KCG’s complaint.

I. BACKGROUND

Entitled “Virtual Smart Phone,” the’955 patent, is directed to “a virtual phone … which includes a touch screen mounted on an enclosure that includes a processor, memory, wireless communication port, and a power port.” ’955 patent, Abstract. The claimed invention also “includes a software application executing on the processor to control image display on the touch screen and emulate features of a handheld device presented in the image in response to a user touching a presented feature.” Id. The specification discloses that:

> [T]he features of the handheld device may include volume controls, messages, e-mails, internet browser, radio, music player, calendar, games, timer, Global Positioning System (GPS), contacts, applications, clock, maps, camera, and the like. More generally, the emulated features may include elements for controlling a handheld device or elements for interacting with applications, of many types, that may be executed on a handheld device.

’955 patent at 1:64-2:5.

The specification explains that the problem addressed by the ’955 patent is that it is dangerous and often illegal to use handheld devices while driving:

> Situations such as operating a vehicle may make use of most smart phones dangerous and handheld device use is illegal while driving in some jurisdictions. Therefore, users must rely in [sic] intermediate devices such as a Bluetooth headset or in-vehicle system that do not provide the full complement of features, including the look and feel of the smart phone to perform a subset of the smart phone functions, while requiring the user to keep the smart phone in proximity while operating the vehicle. Similarly users often become familiar with operation of a smart phone, yet need to learn several other types of electronic device interfaces to conduct daily business, make phone calls, access the internet, and the like. Therefore, users experience unnecessary complication and inefficiency in interacting with these various interfaces when almost all of the capabilities required for daily access to the internet and electronic media are embodied in the smart phone user interface and features.

'955 patent at 1:30-46. Implemented in an automobile,[2] the virtual smart phone gives the driver a simple way of using his or her phone or other handheld device while driving. Id.

Figure 1 of the '955 patent, reproduced below, "depicts a block diagram of a smart phone in communication with a system that facilitates accessing the features, functions, resources and the like of the smart phone through an image of the smart phone that is projected on a touch screen." Id. at 3:44-48.

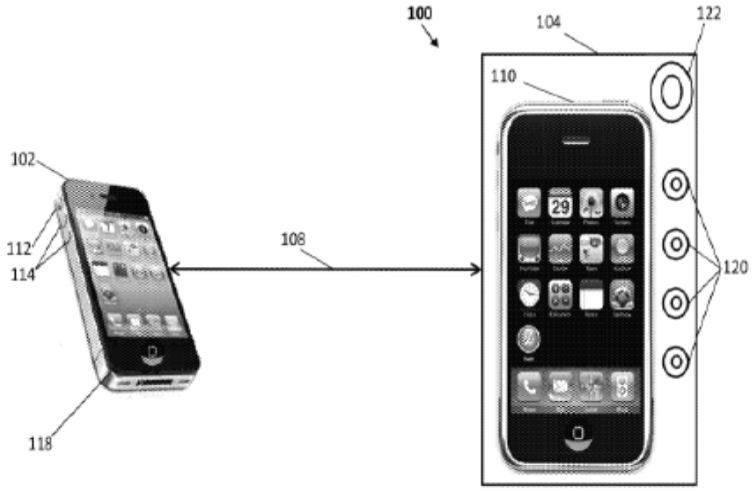

Fig. 1

Id., Fig. 1. The specification explains that "[a]ccessing any or all features of a handheld device may be accomplished by interacting with a touch screen that displays an image of the handheld device" and that "[t]he virtual smart phone 100 may facilitate accessing a handheld device 102 through a communication means 108 (such as a computer network, the internet, Bluetooth, WiFi, WiMax, LTE, and the like)." Id. at 3:48-54.

[2] Although the claims are limited to virtual smart phones in "automobiles," the specification also refers to "vehicles" and teaches that "[t]he term vehicle herein may refer to any type of human conveyance (e.g. automobile, truck, taxi, coach, train, carriage, airplane, boat, ship, submarine, bicycle, motorcycle, and the like) that may be motorized, manually operated, animal powered, autonomously operated, and the like." '955 patent at 4:44-48.

As shown in Figure 1, the virtual smart phone includes a software application that allows the virtual smart phone to include buttons that emulate the physical buttons that are on the handheld device. Id. at 3:66-4:7. The virtual smart phone also includes a screen, such as a touch screen, for displaying the image of the handheld device, which image is received by means of wired or wireless communication. Id. at 3:57-64. The "displayed image may emulate all the features, functions, applications and the like of the handheld device 102 and may provide an exact look-and-feel of the handheld device 102." Id. at 7:64-67.

The '955 patent has two independent claims—claim 1, an apparatus claim, and claim 3, a method claim. The dependent claims all depend directly or indirectly from claim 1, which recites:

> **1.** A virtual smart phone, comprising:
>
> a screen mounted in an automobile;
>
> a processor, a non-transitory memory, and a power port mounted in the automobile;
>
> a software application executing on the processor to control image display on the screen and emulate features of a handheld device;
>
> a visual representation of a plurality of features of the handheld device on the screen; and
>
> an interactive element, wherein the interactive element allows access to the plurality of features of the handheld device, wherein the plurality of features of the handheld device comprises volume control, messages, phone call, email, internet browser, music player, calendar, Global Positioning System, contacts, and maps.

'955 patent, claim 1. Claim 3 recites:

> **3.** A method of accessing features of a smart phone in an automobile, comprising:
>
> receiving at a processor in an automobile information representative of a smart phone user interface, including features thereof;
>
> receiving at a processor in an automobile information representative of data associated with the smart phone;

> displaying an image representative of the smart phone including actionable elements based on the data; and
>
> facilitating, with the processor, access to at least one feature of the smart phone in response to a user interacting with at least one of the actionable elements independent of access to the smart phone,
>
> wherein the actionable elements comprise volume control, messages, phone call, email, internet browser, music player, calendar, Global Positioning System, contacts, and maps.

'955 patent, claim 3.

II. LEGAL STANDARD

Federal courts must dismiss cases that fail to state a claim upon which relief can be granted. Fed. R. Civ. P. 12(b)(6). In a patent case, if the patent that is allegedly infringed is directed to ineligible subject matter, the complaint does not state a claim upon which relief can be granted. See, e.g., In re TLI Commc'ns LLC Patent Litigation, 823 F.3d 607, 609-10 (Fed. Cir. 2016) (affirming grant of a motion to dismiss based on ineligibility under § 101); OIP Techs., Inc. v. Amazon.com, Inc., 788 F.3d 1359, 1362 (Fed. Cir. 2015) (same).

Subject matter eligibility under Section 101 of the Patent Act is a threshold inquiry and a question of law. Bilski v. Kappos, 130 S. Ct. 3218, 3225 (2010). It provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The Supreme Court has held that the broad language of this provision is subject to an implicit exception for "laws of nature, natural phenomena, and abstract ideas," which are not patentable. Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347, 2354 (2014).

To determine whether the exception applies, the Supreme Court has set forth what is by now the familiar two-step inquiry. Courts must determine: first, whether the claim is directed to a patent-ineligible concept, i.e., a law of nature, a natural phenomenon, or an abstract idea; and if so, second, whether the elements of the claim, considered "both individually and as an ordered combination," add enough to "transform the nature of the claim' into a patent eligible application." Id. at 2355 (internal quotation marks and citation omitted).

Applying this two-step analysis to claims challenged under the abstract idea exception, courts first evaluate "the focus of the claimed advance over the prior art to determine if the claim's character as a whole is directed to excluded subject matter." Affinity Labs of Tex., LLC v. DIRECTV, LLC, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (Affinity Labs I) (internal quotation marks and citation omitted). In the context of computer-related technology, a claim must be directed to a specific "improvement in computer capabilities" rather than "an 'abstract idea' for which computers are invoked merely as a tool." Enfish, LLC v. Microsoft Corp., 822 F.3d 1327 (Fed. Cir. 2016); see also TLI Commc'ns, 823 F.3d at 612-13 (same). Also relevant to the inquiry is whether "the claimed invention is entirely functional in nature"—i.e., whether it recites software and other generic computer-related components that perform certain functions—without claiming or even describing "how to implement" the desired functions. Affinity Labs I, 838 F.3d at 1258. If so, the claimed invention is likely directed to an abstract idea. See id.

If the claims are directed to an abstract idea, courts must then "search for an inventive concept" that "transform[s] the nature of the claim into a patent-eligible application." Alice, 134 S. Ct. at 2355 (internal quotation marks and citation omitted). "At step two, more is required than 'well understood, routine, conventional activity already engaged in by the scientific community,' which fails to transform the claim into 'significantly more than a patent upon the' ineligible

concept itself." Rapid Litig. Mgmt. v. CellzDirect, Inc., 827 F.3d 1042, 1047 (Fed. Cir. 2016) (quoting Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1298, 1294 (2012)).

III. DISCUSSION

A. The '955 patent is directed to an abstract idea.

The '955 patent is drawn to the abstract idea of emulating the features of a smartphone or other handheld device on another screen. See '955 patent, claim 1; id. Figs. 1, 2; id. at 3:44-4:26. In this regard, the abstract idea underlying the claims of the '955 patent is not meaningfully distinguishable from the abstract ideas found in many of the patent claims that the Federal Circuit has held to be patent ineligible in recent years. See, e.g., Affinity Labs I, 838 F.3d at 1258 ("The concept of providing out-of-region access to regional broadcast content is an abstract idea, as that term is used in the section 101 context."); TLI Commc'ns, 823 F.3d at 610, 611 (holding that a patent that "relates generally to an apparatus for recording of a digital image, communicating the digital image from the recording device to a storage device, and to administering the digital image in the storage device" was directed to "the abstract idea of classifying and storing digital images in an organized manner") (internal quotation marks and citation omitted); Ultramercial, Inc. v. Hulu, LLC, 772 F.3d 709, 715 (Fed. Cir. 2014) ("The process of receiving copyrighted media, selecting an ad, offering the media in exchange for watching the selected ad, displaying the ad, allowing the consumer access to the media, and receiving payment from the sponsor of the ad all describe an abstract idea, devoid of a concrete or tangible application. Although certain additional limitations, such as consulting an activity log, add a degree of particularity, the concept embodied by the majority of the limitations describes only the abstract idea of showing an advertisement before delivering free content.").

The claims of the '955 patent recite only a desired function—that of emulating the features of a smartphone or other handheld device on another screen—not a particular way of performing that function. The '955 patent neither claims nor describes the means by which its desired function is to be achieved or implemented. See, e.g., Pres. Wellness Techs. LLC v. Allscripts Healthcare Solutions, 2:15-CV-1559, 2016 U.S. Dist. LEXIS 61841, * 24 (E.D. Tex. May 10, 2016), aff'd Pres. Wellness Techs. LLC v. Allscripts Healthcare Solutions, Inc., 684 Fed. Appx. 970 (Fed. Cir. 2017) ("The idea at the heart of the '271 patent is to have a network-based system manage medical records to allow patients and physicians different levels of access to the records. The underlying idea is simply the performance of that function, not a technological solution that enables that function to be performed in a certain manner.").

Independent claim 1, for example, recites generic computer components such as "a screen," "a processor," "a non-transitory memory," and "a power port," all "mounted in an automobile," along with "a software application," "a visual representation," and "an interactive element, wherein the interactive element allows access to the plurality of features of the handheld device." '955 patent, claim 1. But it says nothing about how these generic computer components are to be implemented to create the claimed virtual smart phone that emulates the features of a smartphone or other handheld device on another screen. See id. "Rather," as the Federal Circuit noted with respect to the patent at issue in Affinity Labs I, "the claim is drawn to the idea itself." 838 F.3d at 1258.[3]

[3] The same applies to independent claim 3, which simply couches the components of apparatus claim 1 into "[a] method for accessing features of a smart phone in an automobile" that comprises a series of functionally defined steps: (a) "receiving at a processor in an automobile [both] information representative of a smart phone user interface," and "representative of data associated with the smart phone," (b) "displaying an image representative of the smart phone including actionable elements based on the data," and (c) "facilitating, with the processor, access to at least one feature of the smart phone in response to a user interacting with at least one of the actionable elements independent of access to the smart phone," "wherein the actionable elements comprise volume control, messages, phone call, email, internet browser, music player, calendar, Global Positioning System, contacts, and maps." '955 patent, claim 3.

KCG argues that "[t]he virtual smart phone described in the '955 patent solves a fundamental problem associated with smart phone technology—the inability to safely access features on the smart phone in an automobile." Doc. No. 15 at 7 (emphasis added); see also id. at 14 (arguing that CarMax "does not address the teaching of the specification that there was a technological problem and that the invention of the '955 patent solved this technological problem.") (citing '955 patent at 1:30-46) (emphasis added). And KCG argues that "the claims at issue are directed to making the screen in a vehicle capable of functioning like a virtual smart phone – with the look, feel, and functionality of a smart phone." Id. at 13 (citing '955 patent, Fig. 2) (emphasis added). "This is not an abstract idea," KCG contends. Id. But the '955 patent does not disclose how the claims "solve" the identified problem. It merely discloses conventional computer components, such as a touch screen, a software application, and generic communication means that include a computer network, the Internet, Bluetooth, WiFi, and cellular technology, and claims the desired function of emulating the features of a smart phone on another screen.

KCG also contends that "that claim 1 covers a virtual smart phone where the screen emulates features of a handheld device," and criticizes CarMax for failing to "address the fundamental aspect of emulation or the concept of generating a virtual smart phone on the screen in the vehicle." Id. (emphasis added). But that is precisely the problem. The claims of the '955 patent are merely drawn to "the aspect of emulation" and to "the concept of generating a virtual smart phone"—an abstract idea—and not to any particular concrete implementation of that idea. They "do no more than describe a desired function or outcome, without providing any limiting detail that confines the claim to a particular solution to an identified problem." Affinity Labs of Tex., LLC v. Amazon.com, Inc., 838 F.3d 1266, 1269 (Fed. Cir. 2016) (Affinity Labs II). This deficiency is fatal to patent eligibility. Id. ("The purely functional nature of the claim confirms

that it is directed to an abstract idea, not to a concrete embodiment of that idea."); Elec. Power Grp., LLC v. Alstom S.A., 830 F.3d 1350, 1356 (Fed. Cir. 2016) ("[T]he essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101.").

KCG next faults CarMax for contending that "the screen is only showing images from the smart phone," and counters that the specification "teaches that a 'software application may further ***emulate features*** of a handheld device presented in the image in response to a user touching a presented feature.'" Doc. No. 15 at 13 (quoting '955 patent at 1:61-64). But here again the specification confirms that the '955 patent is drawn to an abstract idea. That the disclosed "software application"—a generic computer component—may "emulate features of a handheld device" says nothing about how that emulation is to be effected. As with the patent at issue in Affinity Labs I, "[n]othing in the [figures] or the text of the specification provides any details regarding the manner in which the invention accomplishes the recited functions." 838 F.3d at 1260.

Nor does the fact that the abstract idea may be limited to the creation of a virtual smart phone in an automobile—as opposed to some other context—alter the result. "All that limitation does is to confine the abstract idea to a particular technological environment." Id. at 1258-59. See also TLI Commc'ns, 823 F.3d at 612–13 (claims reciting "a telephone unit" and a "server" were not directed to an improvement to existing systems to solve a technological problem, but were instead directed to a generic technological environment in which the abstract idea of classifying an image and storing the image based on its classification was carried out).

Citing the Federal Circuit's opinions in Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016) and McRO, Inc. v. Bandai Namco Games Am. Inc., 837 F.3d 1299 (Fed. Cir. 2016), KCG argues that claims directed to improving the functioning of computers or to

improving an existing technological process are not drawn to abstract ideas. Doc. No. 15 at 11. Relying on these opinions, KCG characterizes the '955 patent as "a system that creates a new device that had never existed before and solved safety issues associated with a handheld device through the unconventional improvement of an existing technology." Doc. No. 15 at 15-16 (emphasis added). KCG goes on to argue that "[t]he '955 patent solves this technological problem through the invention of a virtual smart phone that can be used on the screen in vehicles" and that "[t]his is accomplished, in part, by using an ordered arrangement of the screen in a vehicle, a software application executing on the processor to control image display on the screen and emulate features of a handheld device, a visual representation of a plurality of features, and an interactive element." Id. at 16 (citing '955 patent, Fig. 2 and 12:54-13:2) (emphasis added).

As a threshold matter, to the extent KCG suggests a bright line rule about the patent-eligibility of claims drawn to computer improvements, it is mistaken, for whether a given claim improves the way a computer works does not, without more, determine whether it is patent-eligible. Enfish 822 F.3d at 1335. In any event, KCG fails to explain how the functional claim limitations in the '955 patent constitute improvements in computer technology—how they "create" any device or "solve" any technological problem when they do not recite how the claimed invention is to be implemented.

The claims of the '955 patent are not directed to any technological improvements or solutions and are easily distinguishable from those at issue in Enfish and McRO. The patent at issue in Enfish claimed a system using a particular type of data structure—a "self-referential" logical model—in which all data entities are arranged in a single table, wherein the rows of the table define the columns. 822 F.3d at 1330. The asserted claims were a "specific implementation of a solution to a problem in the software arts," namely, that the structural requirements of prior

art "relational" model databases required a programmer to predefine a structure, and subsequent data entry had to conform to that structure. Id. at 1337. Through means-plus-function limitations performed by a four-step algorithm disclosed in the specification, the Enfish patent claimed this "self-referential" way of storing information in a computer as its invention. Id. at 1336–37. Thus, the Enfish patent claimed an improvement in how a computer can store information, not the generic function of storing information. Id. at 1399. Unlike the claims at issue in Enfish, the '955 patent claims are not directed to any specific implementation of the function of emulating the features of a smartphone or other handheld device on another screen, let alone to a specific improvement of that function that would enable it to be performed in a particular way.

The '955 patent is also distinguishable from the patents at issue in McRO. The McRO patents were directed to a new process of automated 3-D computer animation, in which a combined order of specific rules was applied to create a sequence of animated characters. 837 F.3d at 1307-08. The Federal Circuit held that the asserted claims contained not merely a prescription for performance of a method, but an adequate description of how the desired result—producing accurate and realistic lip synchronization and facial expressions in animated characters—was to be achieved. Id. at 1315; accord Elec. Power, 830 F.3d at 1355 ("Inquiry therefore must turn to any requirements for how the desired result is achieved"). The claims of the '955 patent contain no such description.

Nor do the limitations recited in the dependent claims, which all depend directly or indirectly from claim 1, add anything to the abstract idea analysis. They are minor details that broadly describe generic types of components and features:

- the claimed screen of the virtual phone may be a touch screen (claim 2);
- the claimed interactive element may also be a touchscreen (claim 4), or it may be a button (claim 5), an element "selected from the group consisting of a remote control, a

mouse, a touch pad, and a track ball" (claim 8), or a "microphone configured to receive voice commands" (claim 9);

- the button in dependent claim 5 "is configured to emulate functionalities of physical buttons on the handheld device" (claim 6);
- the functionalities in claim 6 "are selected from the group consisting of volume control, ring/silent, power on/off, sleep mode/wake mode, home, and speed dialing" (claim 7);
- the claimed virtual smart phone "is adapted to emulate features from handheld devices of different operating systems" (claim 10);
- the claimed "data on the handheld device is synchronized in the virtual smart phone" (claim 11);
- the claimed data "comprises configuration data" (claim 12); and
- the claimed "configuration data is stored in the non-transitory memory" (claim 13).

Like the limitations in claim 1 itself, the dependent claim limitations all comprise generically defined components and features, and, as such, are not enough to convert the claimed subject matter into a concrete application of the abstract idea to which the patent is drawn—that of emulating the features of a smartphone or other handheld device on another screen.

B. The '955 patent contains no inventive concept that would transform the abstract idea to which it is direct into patentable subject matter.

At issue in step two of the patent ineligibility analysis is whether the limitations of the claims of the '955 patent, when considered individually and in an ordered combination, contain any inventive concepts sufficient to transform the abstract idea into a patent eligible invention. Alice, 134 S. Ct. at 2357. As the Supreme Court has explained, an inventive concept for purposes of the § 101 analysis is "an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself" (whether that ineligible concept is an abstract idea, a natural law, or a physical phenomenon). Id. at 2355.

The ’955 patent claims contain no inventive concept that can transform the abstract idea to which they are drawn into patent eligible subject matter because the claimed components and features such as “a screen,” “a processor,” “a non-transitory memory,” “a power port,” “a software application,” “a visual representation,” and “an interactive element,” are all generically defined and conventional. See, e.g., Affinity Labs I, 838 F.3d at 1263 (“the abstract idea of remote delivery will be implemented using the conventional components and functions generic to cellular telephones”); Affinity Labs II, 838 F.3d at 1270 (“Affinity makes no claim that it invented any of those components or their basic functions, nor does it suggest that those components, at that level of generality, were unknown in the art as of the priority date of the ’085 patent”); Elec. Power, 830 F.3d at 1355 (“Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information.”).

KCG does not dispute that the claimed technological components are conventional but argues that this is “irrelevant.” Doc. No. 15 at 17. “What is relevant,” it says, “is whether the technology is improved by the invention or used in a new and unconventional way.” Id. For the reasons presented above, the Court finds that the ’955 patent does not claim any technological improvement or unconventional use.

C. KCG raises no genuine questions of fact that would render disposing of this case at this stage improper.

Also unavailing is KCG’s argument that there are factual disputes that render disposition of this case at the motion to dismiss stage improper. Doc. No. 15 at 19. KCG contends that “[t]hose disputes include: 1) who is the skilled artisan; 2) whether the skilled artisan would consider the claims well-understood, routine, and conventional; and 3) how the skilled artisan would interpret the prior art and the problem solved by the invention as described in the ’955

patent." Id. at 19-20. But KCG fails to point to anything in the claims or the specification that raises a genuine factual dispute as to the meaning of the claims or their purely functional nature, which is evident from the face of the patent.

D. The Court need not address CarMax's argument that KCG's allegations do not meet the pleading requirements.

Having determined that the claims of the '955 patent are drawn to ineligible subject matter, the Court need not and does not address CarMax's argument that KCG's allegations of direct, indirect, and willful infringement fail to meet the pleading requirements and therefore fail to state a claim for which relief can be granted.

IV. CONCLUSION

Accordingly, the Court concludes that, based on the governing principles laid down by the Supreme Court and by the Federal Circuit in the many patent-eligibility opinions applying the Supreme Court's guidance, the claims of the '955 patent are not drawn to patent-eligible subject matter under 35 U.S.C. § 101. The Court therefore GRANTS CarMax's motion to dismiss (Doc. No. 13). KCG's complaint is hereby DISMISSED with prejudice.

The clerk shall close this case.

SO ORDERED.

/s/ Leo T. Sorokin
Leo T. Sorokin
United States District Judge