IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

KAAVO INC., Plaintiff, v. APPFOG, TIER 3, INC., and SAVVIS, COMMUNICATIONS CORPORATION, Defendants.	C.A. No. 14-1193-LPS-CJB **JURY TRIAL DEMANDED**

OPENING BRIEF IN SUPPORT OF DEFENDANTS' RULE 12(B)(6) MOTION TO DISMISS FOR FAILURE TO ALLEGE INFRINGEMENT OF A PATENTABLE CLAIM UNDER 35 U.S.C. § 101

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I. NATURE AND STAGE OF PROCEEDINGS

Kaavo filed its Complaint on September 15, 2014. (D.I. No. 1.) No case management or scheduling conference has been held and discovery has not commenced. This motion to dismiss is a dispositive motion under Federal Rule of Civil Procedure 12(b)(6).

II. SUMMARY OF ARGUMENT

Because the claims of Kaavo's asserted patent, U.S. Patent 8,271,974 (the "'974 patent") describe an unpatentable, abstract concept without adding to it any true technology or inventive concept, the '974 patent is invalid. Because of this fatal defect in the only patent-in-suit, Defendants AppFog, Tier 3, Inc., and Savvis Corporation (collectively "Defendants") move the Court to dismiss Kaavo's Complaint under Federal Rule of Civil Procedure 12(b)(6).

In recent decisions, both the Supreme Court and the Federal Circuit make clear that courts may, and should, invalidate, under 35 U.S.C. § 101, patent claims that recite nothing more than performing some general, abstract idea on a generic computer system. The claims of Kaavo's asserted '974 patent are just such claims. They address the general idea of choosing what computers on which to run a computer application—taking into account such general concepts as computer availability and costs. The claims add nothing but generic recitation of computers to this general idea (that can be performed manually by a person managing any "environment"), and the '974 patent emphasizes that ***any*** computer will work. These claims describe a basic concept that has been around for millennia and can, and has, been completely accomplished by the human mind, including by system engineers well before the '974 patent.

As such, the '974 patent is invalid, and Defendants move the Court to dismiss Kaavo's Complaint in its entirety.

III. LEGAL STANDARD

Invalidity under § 101 is a question of law. *In re Bilski*, 545 F.3d 943, 951 (Fed. Cir. 2008) (en banc), *aff'd*, 130 S. Ct. 3218 (2010). Because the pleadings are the threshold of litigation, section 101 issues are properly considered under Rule 12(b)(6). *See, e.g.*, *Ultramercial, Inc. v. Hulu, LLC*, No. 2010-1544, 2014 WL 5904902, at *6 (Fed. Cir. Nov. 14, 2014) (affirming dismissal under Rule 12(b)(6)).[1] Furthermore, "There is no requirement that the district court engage in claim construction before deciding § 101 eligibility." *Cyberfone Sys. v. CNN Interactive Grp., Inc.*, 558 F. App'x 988, 922 n.1 (Fed. Cir. 2014) (quotation omitted).

IV. THE CLAIMS OF THE '974 PATENT ARE INELIGIBLE FOR PATENT PROTECTION UNDER SECTION 101

A. Section 101 Eligibility Is Determined By A Two-Part Test

It is black-letter law under section 101 that laws of nature, abstract ideas, and natural phenomena cannot be patented. *Mayo Collaborative Servs. v. Prometheus Labs, Inc.,*--- U.S. ---, 132 S. Ct. 1289, 1293 (2012). Thus, when a patent addresses abstract ideas, the claim must add "significantly more" to be patent-eligible. *Id.*, 132 S. Ct. at 1294; *see also Bilski v. Kappos*, 561 U.S. 593, 130 S. Ct. 3218 (2010).

The Supreme Court has established a two-part test to determine patentability under section 101. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, *et al.*, --- U.S. ---, 134 S. Ct. 2347 (2014). A court first "determine[s] whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.* At step one, a court must evaluate the claims "[o]n their face" to determine to which "concept" the claims are "drawn." *Id*. 134 S. Ct. at 2356; *Bilski*, 130 S. Ct. at 3229 (finding claims drawn to "both the concept of hedging risk and the application of that concept to energy markets"

[1] Although clear and convincing evidence must generally be presented to invalidate a patent, such a heightened standard is inapplicable here. *See Ultramercial,* 2014 WL 5904902, at *9-10 (Mayer, S.J., concurring).

to be patent ineligible). To uncover the abstract idea, "the court must identify the purpose of the claim—in other words, determine what the claimed invention is trying to achieve—and ask whether that purpose is abstract." *Enfish, LLC v. Microsoft Corp.*, No. 2:12-cv-07360, 2014 WL 5661456, at *7 (C.D. Cal. Nov. 3, 2014).

If the claims are directed to a patent-ineligible concept, the second step requires a court to determine whether the claim elements "individually and 'as an ordered combination'" are additional elements that "'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 132 S. Ct. at 1291, 1297). In other words, the second step is to "search for an 'inventive concept'—*i.e.*, 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.'" *Id.* (alteration in original) (quoting *Mayo*, 132 S. Ct. at 1294). "Simply appending conventional steps, specified at a high level of generality, [is] not enough to supply an inventive concept." *Alice*, 134 S. Ct. at 2357 (internal quotation marks omitted).

One way a claim may recite "significantly more" than an abstract idea is to be "tied to a particular machine or apparatus" or "transform a particular article into a different state or thing." *Bilski*, 130 S. Ct. at 3230. However, "the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention . . . [nor] is limiting the use of an abstract idea to a particular technological environment" enough for patent eligibility. *Alice*, 134 S. Ct. at 2358. The '974 patent claims fail this test and are unpatentable under section 101.

This brief first discusses claim 1, follows with its dependent claims, and then addresses the other independent claims (which are all substantially the same as claim 1 for present purposes) and their dependent claims.

B. The Method Claims Of The '974 Patent Describe Unpatentable Material

1. Claims 1 covers the abstract concept of setting up and managing a computing environment

The '974 patent claims address, in slightly varying manners, the idea of selecting which computer in an environment should execute a particular computer program. In personal computing, all programs run on an individual (personal) computer. Computers that are utilized in a larger-scale environment can be used by many people, and because of ebbs and flows in the computing needs of those people, the "utilization" of those computers can be relatively low—an unacceptable dead loss expense. It is therefore common to split up computers within a system into multiple "virtual machines" that can run essentially simultaneously on a single server,[2] carrying out different application programs for different users—thereby substantially increasing the utilization of each server. When companies like Amazon and Google make these virtual servers available to third parties, such third parties are said to be operating in the "cloud."

In this context, claim 1 simply lays out six steps for setting up and managing a computing environment. The method starts by getting the user's information, sending a command to start up a virtual machine (a "computing environment"), sending the application to the virtual machine, and then making sure the application is running properly. The following table shows each step along with its corresponding functional purpose:

Claim Language	**Functional Purpose**
Claim 1. A method for managing a cloud computing environment for use by a software application comprising:	[Preamble]
determining a requested initial cloud environment based on user-defined provisioning information, where the requested initial cloud environment is not yet instantiated and is an N-tier computing environment;	Determining user's parameters
sending an initialization event based on the requested initial cloud environment, where the initialization event is	Setting up an initial environment

[2] A server is akin to the hard-drive on a personal computer.

Claim Language	**Functional Purpose**
configured to cause an initial cloud environment configuration to be made available to an application;	
sending application data that is configured to cause the application to begin execution in the initial cloud environment configuration;	Starting an application in the environment
receiving monitoring environment data that represents a current cloud environment state;	Monitoring the environment
determining a requested adjusted cloud environment based on the monitoring environment data, where the requested adjusted cloud environment is an N-tier computing environment; and	Determining environment adjustments
sending a cloud environment adjustment event based on the requested adjusted cloud environment, where the cloud environment adjustment event is configured to cause an adjusted cloud environment configuration to be made available to the application.	Adjusting the environment

Notably, although the method acts on a computer, nothing in the claim recites that the steps are performed by particular inventive computer hardware or any technology at all.

Instead, a human user could make the determinations recited in the claim in their head, and provide the parameters to the target computers. A direct analogy to the management of physical computers illustrates this point. A person could determine that she wants to read her email message, could determine that portability is her prime parameter, and thus select her iPhone and launch the email application on her iPhone. As she is reading an email with a complex attachment, she may recognize that the iPhone computer environment is insufficient, and may adjust that environment by rotating her iPhone, or may switch to a different resource ("environment") that is better suited for the current needs of her system, by switching to her iPad or iMac laptop with bigger screens. These are determinations that the human user can make in her head. Claim 1 recites nothing meaningful beyond such an example, other than moving it to virtual, rather than physical, computers and that is insufficient to make it patent-eligible.

Indeed, the applied concept of claim 1 is a fundamental activity that people have used for millennia to manage almost any "environment", including those far removed from computing. In the most fundamental and least technical example, a person performs the same steps of the '974 patent when building a camp fire.[3] A "fire manager" would determine the proper fire size based on weather, attendees, and like information. He then builds and starts a fire of a desired size based on the initial determination. The fire manager then begins activities involving the fire such as roasting marshmallows or gathering attendees who want to keep warm, and monitors the fire size to see if it is adequate for the desired activities. He then adjusts the fire (add wood or let it burn down) based upon his monitoring of the fire and its purpose. One could easily adapt these same steps to any resource management task involving selecting a resource and monitoring its performance, be it managing an assembly line, a warehouse inventory, or even a baseball lineup. And importantly, no computer is necessary, as the steps can all be carried out by a human. The applicability of these steps to a wide variety of situations highlights the abstract and generic nature of Claim 1.

2. Claim 1 does not contain an inventive concept

As an abstract idea, claim 1 can claim patentable material only if its elements (or combination of its elements) contain an "inventive concept" that "transforms" the claimed abstract idea into patent-eligible subject matter. *Alice*, 134 S. Ct. at 2357. Claim 1 does not contain an inventive concept.

[3] "Recent precedents have suggested longstanding, fundamental practices may be abstract. For example, in *Bilski v. Kappos*, 561 U.S. 593, 130 S. Ct. 3218 (2010), the Supreme Court invalidated a claim addressed to hedging risk, a fundamental economic practice long in use. See *id*. at 611. Similarly, in *Alice*, the Supreme Court invalidated a claim addressed to a computerized method of intermediated settlement because the idea was longstanding. *See Alice*, 134 S. Ct. at 2356 (noting intermediated settlement is a fundamental economic concept and a building block of the economy). Longstanding practices are often the building blocks of future research and development. Patents on these practices would significantly impede productive or inventive activity, to the detriment of society." *Enfish*, 2014 WL 5661456 at *9.

The transformation of an abstract idea into patent-eligible subject matter "requires 'more than simply stat[ing] the [abstract idea] while adding the words 'apply it.'" *Id.* (quoting *Mayo*, 132 S. Ct. at 1294) (alterations in original). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 132 S. Ct. at 1297) (alterations in original). Those "additional features" must be more than "well-understood, routine, conventional activity." *Mayo*, 132 S. Ct. at 1298.

Importantly, an abstract idea does not become tangible because the claimed invention is employed by a computer. *Alice*, 134 S. Ct. at 2358 ("[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention."). Nor does the application of the fundamental concept of setting up and managing an environment to a computerized environment or cloud create patentable significance. "[L]imiting the use of an abstract idea to a particular technological environment" is not enough for patent eligibility. *Id*. The Supreme Court has noted that "the Pythagorean theorem would not have been patentable, or partially patentable, because a patent application contained a final step indicating that the formula, when solved, could be usefully applied to existing surveying techniques" because that would only be applying a fundamental concept to a particular application. *Parker v. Flook*, 437 U.S. 584, 590, 98 S. Ct. 2522, 2525, 57 L. Ed. 2d 451 (1978); *see also Cloud Satchel, LLC v. Amazon.com, et al.*, Civ. Nos. 13-941-SLR, 13-942-SLR, at *17 (D. Del. Dec. 18, 2014) (Robinson, J.) (slip copy). (Ex. 1).

The concept of setting up and managing a computing environment, even in the context of assigning software applications to particular virtual machines, is such a fundamental premise, that allowing a patent on it, without limitation, will "impede innovation more than it [will] tend to promote it, thereby thwarting the primary object of the patent laws." *Alice*, 134 S. Ct. at 2354.

Indeed, claim 1 uses broad, generic language, which serves to tie up as much of the underlying idea as possible. Though directed towards a computer system, nothing in the method of claim 1 requires performance by anything tangible. While the "cloud computing environment" and "software application" elements of claim 1 expressly place the claim in the broad subject area of computing systems, the claim itself is not limited to even a general purpose computer. In fact, the '974 patent states as much: "[s]ome (up to all) of the steps described in the sections above may be implemented using a computer having a processor (e.g., one or more integrated circuits) programmed with firm-ware and/or running software." '974 patent at 16:43-46 (emphasis added). And in fact, while some of the claim elements involve controlling a computer, none recites that they have to be carried out by a computer, as opposed to a human operator. As with the human job headhunter in *Walker Digital*[4], any system engineer setting up and managing a computerized environment could easily perform the steps of claim 1. *Walker Digital, LLC v. Google, Inc.*, No. CV 11-318-LPS, 2014 WL 4365245, at *9 (D. Del. Sept. 4, 2014) (Stark, J.).

Claim Language	**Abstract Idea Covers Routine Computer Management**
Claim 1. A method for managing a cloud computing environment for use by a software application comprising:	[Preamble]
determining a requested initial cloud environment based on user-defined provisioning information, where the requested initial cloud environment is not yet instantiated and is an N-tier computing environment;	The engineer studies requirements for the computing environment and determines the desired structure. These requirements could include cost, bandwidth, storage, desired applications, and security.
sending an initialization event based on the requested initial cloud environment, where the initialization event is configured to cause an initial cloud environment configuration to be made available to an application;	The engineer tells his employees to set up a computing environment to his specifications
sending application data that is configured to	The engineer loads applications onto the

[4] *Walker Digital* described a hypothetical example where a human job headhunter could perform every step of a patent ineligible claim.

cause the application to begin execution in the initial cloud environment configuration;	computing environment and allows users to run those applications in the computing environment
receiving monitoring environment data that represents a current cloud environment state;	The engineer monitors the computing environment's server load, number of users, cost, data storage, and security.
determining a requested adjusted cloud environment based on the monitoring environment data, where the requested adjusted cloud environment is an N-tier computing environment; and	Based on the monitoring data he received, the engineer determines that the computing environment's data storage is not sufficient to meet the users' needs
sending a cloud environment adjustment event based on the requested adjusted cloud environment, where the cloud environment adjustment event is configured to cause an adjusted cloud environment configuration to be made available to the application.	The engineer sends his employees a message to change the amount of storage on the computing environment

This example demonstrates that the claim is not tied to any tangible object because a person can (and for years did) perform every step of the method. Without a "particular concrete or tangible form," the claim remains nothing more than an abstraction and "the transformation of an abstract idea into patent-eligible subject matter 'requires more than simply stat[ing] the [abstract idea] while adding the words apply it.'" *Ultramercial*, 2014 WL 5904902 at *11-12 (quoting *Alice*, 134 S. Ct. at 2357). At the same time, because the claim can be "performed entirely in a person's mind using routine and conventional steps, it is not directed to patentable subject matter." *Walker Digital,* 2014 WL 4365245 at *9. The claims, in the end, are nothing more than the old manual process of a computer administrator picking computers to run certain programs on—but applied in the virtualized cloud environment rather than the physical environment. The claims recite nothing inventive about the computing environment itself, nor does the patent purport to have made an improvement in any computer or device employing the claimed method. The mere limitation to virtual, rather than physical, does not confer patent-eligibility. *Alice*, 134 S. Ct. at 2358 ("[L]imiting the use of an abstract idea to a particular technological environment" is not enough for patent eligibility.").

Similar to the claims in *Alice* that "amount[ed] to nothing significantly more than an instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer," *Alice*, 134 S. Ct. at 2360, claim 1 amounts to nothing significantly more than an instruction to apply the abstract idea of setting up and managing a computing environment using some unspecified, generic software. This is not enough to transform an abstract idea into a patent-eligible invention. *See id*. at 2358 ("The mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea while adding the words 'apply it' is not enough for patent eligibility.").

The Federal Circuit's most recent Section 101 decision further shows why the '974 patent's claims fall on the wrong side of the patent-eligibility line. In *DDR Holdings, LLC v. Hotels.com, L.P.*, No. 2013-1505, 2014 WL 6845152 (Fed. Cir. Dec. 5, 2014), the claims were eligible because the claims address a particular technical solution that did not have an old, manual analog. In particular, the majority in *DDR* noted the claimed internet store-within-a-store was fundamentally different from a real-world activity, because on the internet you could be immediately taken to an entirely different store. *Id.* at *11. This aspect of the internet was unique and dissimilar to past real-world circumstances. *Id.* The Federal Circuit held the *DDR* claims patent-eligible because "**the claimed solution [was] necessarily rooted in computer technology** in order to overcome a problem specifically arising in the realm of computer networks." *Id*. at *10 (emphasis added). It was the claimed technical solution that was the focus of the DDR analysis, not the realm of the problem. *Id*. at *12 ("In short, **the claimed solution** amounts to an inventive concept for resolving this particular Internet-centric problem, rendering the claims patent-eligible") (emphasis added).

In contrast to *DDR*, the '974 patent's claims are nothing more than the old manual process of putting a program on a particular computer and monitoring its operation, as applied to virtualized computer environments instead of physical ones. It is precisely this minor step from the

physical world to a generically-recited computer implementation that the courts have repeatedly found to lack patent-eligibility, and that the *DDR* court emphasized as the all-important distinction in that case. Unlike the technical solution in *DDR* which required a specialized system of databases, links, servers, and hybrid web pages to solve a problem unique to the internet, the '974 patent's claimed solution is simply a fundamental computer resource management concept that was previously done by system engineers themselves and now is being employed by any general computer. Indeed, conspicuously absent from claim 1 is action performed by anything remotely technical. As a result, this solution is not rooted in technology, it is rooted in longstanding practice of setting up, monitoring, and adjusting an environment. In short, the '974 patent's claims simply perform a known, real world process in a "cloud computing environment." The known process employed is not inventive or patent-eligible because it is in "in the cloud."

Further, as shown next, no step adds any patentable significance or an inventive concept above the abstract idea of setting up and maintaining a computing environment:

a. Determining environment parameters is not inventive

The first step in the claimed method is "determining a requested initial cloud environment based on user-defined provisioning information." Functionally, this amounts to nothing more than finding out what a user wants from his computer. This is a routine step that is necessarily part of setting up any computing environment. For example, any computer user would know that a different type of computer (either virtual or physical) is best for intense graphics needs as opposed to pedestrian word processing needs—and would thus consider factors like size, cost, location, speed, desired applications, or other such rudimentary parameters. That these parameters are supplied by users is simply a factor that points to this step not adding any patentable significance to the underlying concept because it reduces this step to simply gathering data. *See Ultramercial*,

2014 WL 5904902 at *11 ("[I]nsignificant data-gathering steps . . . add nothing of practical significance to the underlying abstract idea").

Importantly, there is no claimed improvement as to **how** to make the claimed determination, only that the determination must be made. This is the epitome of claiming a ***result*** and does not add tangibility to the abstract idea. A claim is not directed toward patentable subject matter "if its purported limitations provide no real direction, cover all possible ways to achieve the provided result, or are overly-generalized." *CLS Bank Int'l v. Alice Corp. Pty.*, 717 F.3d 1269, 1301 (Fed. Cir.), *aff'd,* 134 S. Ct. 2347, 189 L. Ed. 2d 296 (2014); *see Mayo*, 132 S. Ct. at 1300; *see also Flook*, 437 U.S. at 586 (explaining that the patent in question, contained an algorithm but did not purport to explain **how** some variables were to be determined). In *Mayo*, the invalidated claims were not saved by a result oriented "determining" step that told "the doctor to determine the level of the relevant metabolites in the blood, through whatever process the doctor or laboratory wish[ed] to use." *Mayo*, 132 S. Ct. at 1297.

The remainder of this element, "where the requested initial cloud environment is not yet instantiated and is an N-tier computing environment;" is "pre-solution activity, which is also not sufficient to transform an otherwise patent-ineligible abstract idea into patent-eligible subject matter." *Ultramercial*, 2014 WL 5904902 at *11 (citing *Mayo*, 132 S. Ct. at 1298). This clause simply limits the "initial cloud environment" to one that does not exist at the outset of the method and notes that the environment can be of any, "N-tier," size and complexity.[5] There is nothing accomplished by this clause except to further define the meaning of "initial cloud environment" and it does not add any patentable significance to the underlying concept.

[5] An N-Tier computing environment—generally, a client-server architecture on which functional components run as logically separate processes—is a basic and common-place concept. As described in the '974 patent, these tiers are "logical groupings of components directed to a

b. Setting up an initial environment is not inventive

This step requires "sending an initialization event based on the requested initial cloud environment" and is functionally equivalent to setting up an initial environment. Like the previous step, this is also a routine step that is necessarily part of setting up any environment—i.e., one has to indicate they want the computer to start. There are no "additional features to ensure that the claim is more than a drafting effort designed to monopolize the abstract idea." *Alice*, 134 S. Ct. at 2357.

Like the other steps, this is also drawn to the result as it neither describes what is sent as the initialization event nor the method for doing so—only that some generic instruction is sent to establish the computerized environment. The same "claiming the result" arguments from section a above are applicable here and are incorporated by reference.

That "the initialization event is configured to cause an initial cloud environment configuration to be made available to an application" is only restating the purpose of the environment—i.e., the user, of course, wants (and needs) the computer to run his program. The idea of an application running in cloud environments was "well-understood, routine, conventional activity" at the time of filing, as shown by art cited on the face of the patent:

- Claim 1: "A method for configuring elements of a **distributed computing system**, said elements including computer devices **forming an environment for processing one or more executable applications**." U.S. Patent No. 7,720,968, filed Apr. 30, 2003, to Clark et al., claim 1 preamble (emphasis added).

- "[T]he present invention is directed to a system and method for **dynamically allocating and provisioning shared computing resources** among a plurality of different types of **software applications** in run-time environments provided by a plurality of different types of **application servers**." U.S. App. Pub. No. 2006/0277305, filed Mar. 30, 2006, to Bernardin et al., para [0002] (emphasis added).

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general type of functionality" while noting that the environment may include 1 or more tiers. *See* '974 patent, at 5:28-39.

- "[A]nother object of the present invention is to provide a system that **virtualizes hardware resources**, implements run-time support for **virtual appliances, composite virtual appliances and virtual applications**; and provides a set of user interface and build tools to support the visual method of designing and **implementing virtual distributed applications** and for deploying and **operating such applications on a wide variety of hardware configurations**. U.S. App. Pub. No. 2007/0078988, filed Sep. 15, 2006, to Miloushev et al., para [0034] (emphasis added).

Thus, this step does not supply an inventive concept to the abstract idea of setting up a computing environment.

c. Starting an application in the environment is not inventive

This step requires "sending application data that is configured to cause the application to begin execution in the initial cloud environment configuration." This is nothing more than a virtual analog to the physical process of putting a disk in a computer with the program on it. There is no mention of how the data is sent, what sends the data, what the data looks like, or how it is configured to act on the application, only that it shall accomplish the desired result. Broadly claiming the result cannot create patentable subject matter. *See* discussion *supra* IV.B.2.a.

Further, causing applications to run in a larger-scale computerized environment is the type of "routine additional step [] [that] . . . does not transform an otherwise abstract idea into a patent-eligible subject matter." *Ultramercial*, 2014 WL 5904902 at *11. Highlighting the routine nature of this step, the art cited in the prior section contain examples of applications running in a cloud environment. Just as in section c above, this routine step does not supply an inventive concept to the abstract idea of setting up a computing environment.

d. Monitoring the environment is not inventive

Next, the claimed method requires "receiving monitoring environment data that represents a current cloud environment state." In short, the user sees that the virtual machine is functioning properly or improperly. This is an "insignificant data-gathering step[]" that "add[s] nothing of practical significance to the underlying abstract idea." *Ultramercial*, 2014 WL 5904902 at *11.

As there is no claimed requirement about how to monitor the environment, it is simply drawn to the generic result of receiving monitoring data. Like the other steps, this is broadly drawn to the result and cannot create patentable subject matter. *See* discussion *supra* IV.B.2.a. Additionally, because this step could easily be performed by "a person's mind using routine and conventional steps, it is not directed to patentable subject matter." *Walker Digital,* 2014 WL 4365245, at *9.

e. Determining environment adjustments is not inventive

After monitoring the environment, the next step is "determining a requested adjusted cloud environment based on the monitoring environment data." In other words, the user identifies a change that needs to be made, such as changing some parameter to make a virtual machine run more smoothly, or switching to another virtual machine. This is a routine step that is part of managing any environment. For example, it is ubiquitous that when managing an environment, one will monitor the environment and determine if any changes need to be made. It is the same as deciding to add wood to the fire when it starts to die, switching from an iPhone to a laptop when a message has a large attachment, or adding more bandwidth when response time slows.

In addition, like the other steps, this element is drawn to the result. It does not claim how the determination should be made, or a specific way to optimize the environment for a desired use. It simply says "do it." This cannot create patentable subject matter. *See* discussion *supra* IV.B.2.a.

This step is a routine and necessary part of the abstract idea and is drawn to the result of the step without providing more. Thus, it does not supply an inventive concept to the abstract idea of managing a computing environment.

f. Adjusting the environment is not inventive

Finally, the last step in the claimed method is "sending a cloud environment adjustment event based on the requested adjusted cloud environment." Functionally, this is simply applying

the determination made in the prior step—e.g., the user putting a floppy disk in a different computer. It is the next logical and routine action after determining what adjustments should be made to the environment and is the equivalent to actually adding wood to the fire (providing additional instruction), switching among physical Apple computing devices or adding bandwidth. Accordingly, there is nothing patentably significant in this step. *Ultramercial*, 2014 WL 5904902 at *11.

Like the prior elements, it is also drawn to the result, not the method of accomplishing the result. This cannot create patentable subject matter. *See* discussion *supra* IV.B.2.a.

As shown, none of the individual elements are "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Mayo*, 132 S. Ct. at 1294.

3. Claim 1 fails to meet the machine-or-transformation test

The machine-or-transformation test remains a "useful clue" in the second step of the section 101 analysis, *Ultramercial*, 2014 WL 5904902 at *12, and claim 1 does not meet that test. A claimed process can be patent-eligible under § 101 if: "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." *Id*.

Claim 1 is not tied to any machine, much less a "novel machine or apparatus." *Id.* at *12. To be "a meaningful limit on the scope of a claim," the addition of a machine "must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly." *SiRF Tech., Inc. v. Int'l Trade Comm'n,* 601 F.3d 1319, 1333 (Fed. Cir. 2010). Hence, the "mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *Alice,* 134 S. Ct. at 2358. "Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of additional feature that provides any practical assurance that the process is

more than a drafting effort designed to monopolize the abstract idea itself." *Id.* At most, claim 1 requires the use of a general purpose computer to run the software described in the preamble, but "adding a computer to otherwise conventional steps does not make an invention patent-eligible." *Id*. at *13. Thus, claim 1 is not tied to a "novel machine." *Id*.

Second, claim 1 also does not transform anything. Claim 1 is drawn to setting up and managing a computer environment, not transforming physical objects or substances. The only actions performed in the claim are "determining," "sending," and "receiving." "Any transformation from the use of computer or the transfer of content between computers is merely what computers do and does not change the analysis." *Id*. at *13. No article in claim 1 is transformed into a different state or altered in any manner.

4. Dependent claims 2-12 do not contain an "inventive concept"

None of claims 2-12 limit the scope of claim 1 in a way that transforms the abstract method of starting and managing a computer environment into a patent-eligible invention. The majority of claims 2-12 simply add generalized and conventional elements to the broad field of computerized-environment management. None of these dependent claims recite any special-purpose computer or other concrete or transformative limitations that would resurrect the claims from abstract computer system management into patentable subject matter.

For example, **claims 2-5** merely add secondary elements to the elements recited in claim 1 without altering the scope or function of those elements. Claims 2 and 4 introduce a "requested second cloud adjusted environment," an "adjusted second cloud configuration," a "second cloud adjustment event," and a "second cloud provider" to the corresponding singular elements recited in claim 1. Claim 3 adds a "requested second cloud initial environment," an "initial second cloud configuration," and a "second cloud initialization event." Such additional configurations are commonplace. One example is an online user migrating from the Internet (first cloud

environment/first cloud provider) to the local area network of a merchant (second cloud environment/second cloud provider).

Claims 5-7 are directed to forecasting an optimal cloud environment for future use and forecasting future cost associated with executing the application. However, the forecasting conditions to support future use and plan for future cost are expected management functions that are easily performed without the use of any computer, much less a special purpose computer and were first performed long before computers were even developed.

Claim 8 recites a needs-analysis algorithm determining the user-defined provisioning information, which is input with a with a user interface. **Claim 10** recites the user-defined provisioning information comprising service level agreement data. One would expect a user to enter information with some type of general user interface and further would expect user-defined information to be developed based on analysis of the user's needs. One would further expect that an agreement governing the provision of the computerized environment to include user-defined information for the environment. Nothing more is recited in these two claims, and nothing in these claims requires a special purpose computer or an inventive step. Geographic data is recited in **claim 9** as being part of the user-defined provisioning information. However, within the abstract concept of managing computer environments that could easily be global in coverage, limiting the coverage geographically fails to add any meaningful limitation to the abstraction of claim 1.

Claim 11 adds the limitation of sending a security event based on determined security action and received security information. This claim broadly recites nothing more than sending some event related to security based on having received security information. Managing a computer environment typically includes monitoring for security breaches and responding accordingly; and nothing in this claim is remarkable, special-purpose, transformative, or can serve

to resurrect claim 1 from its abstract management environment. **Claim 12** merely recites several general, known, and expected hardware elements of a computer environment.

In sum, none of the claims depending from independent claim 1 add any inventive concept or even meaningful technological content to the abstract computer system management method of claim 1. At best, these claims recite insignificant pre-solution activity to the abstract concept of managing a computerized environment and are also unpatentable under section 101. *Ultramercial*, 2014 WL 5904902 at *11.

C. The Remaining Independent Claims Are Substantially Similar To Claim 1.

The ’974 patent has three other independent claims, claims 13, 24, and 35. Each of these three claims is substantially identical to independent claim 1. As shown next, each independent claim, like claim 1, is unpatentable under section 101.

1. Independent claim 13 covers unpatentable material

Claim 13 is a system claim that contains the same limitations as claim 1 and adds, “a processor in communication with a memory, where: the memory stores processor-executable program code; and the processor is configured to be operative in conjunction with the processor-executable program code to” perform the steps of claim 1. These added limitations are conventional and generic computer hardware and cannot add patentable significance to the claimed invention. *Alice*, 134 S.Ct. at 2360 (“The claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer.”). The specification even notes the “CPU 502 may be a general purpose CPU or microprocessor,” ’974 patent, 11:22-23, and the “[s]ystem 10 also may include Random Access Memory (RAM) 508, which may be SRAM, DRAM, SDRAM, or the like.” *Id*. at 11:30-32.

2. Independent claim 24 covers unpatentable material

The preamble is the only difference between claim 24 and claim 1. Claim 24 is directed to "[a] tangible computer readable storage medium having computer usable program code executable to perform the operations comprising" the steps of claim 1. In *Alice*, the Court found that similar "media claims add nothing of substance to the underlying abstract idea . . . [and] are patent ineligible under § 101." *Alice*, 134 S. Ct. at 2360.

3. Independent claim 35 covers unpatentable material

Claim 35 goes one step farther than claim 24 and requires a "computer readable storage medium having first computer usable program code, where: the first computer usable program code is executable to install second computer usable program code on a second computer readable medium; and the second computer usable program code is executable to perform" the steps of claim 1. This drafting technique to capture the installation of the claimed software on a computer adds nothing of significance to the claimed process. It is "pre-solution activity, which is also not sufficient to transform an otherwise patent-ineligible abstract idea into patent-eligible subject matter." *Ultramercial*, 2014 WL 5904902 at *11.

D. The Remaining Dependent Claims Do Not Add Inventive Steps

Dependent claims 14-23, 25-34, and 36-45 depend, respectively, from claims 13, 24, and 35. These dependent claims are nearly identical to those depending from claim 1 and are not patent eligible for the same reasons as discussed above. *See* discussion *supra* IV.B.2.

V. CONCLUSION

Because the '974 patent is invalid for claiming non-patentable subject matter under 35 U.S.C. § 101, Defendants ask the Court to hold that the '974 is invalid and dismiss the Complaint in its entirety.

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