Eligibility Contentions Appendix C – U.S. Patent No. 11,082,518

The following charts contain Defendants' Subject-Matter Ineligibility Contentions demonstrating that claims 1-20 of U.S. Patent No. 11,082,518 (the "'518 Patent") are patent-ineligible under 35 U.S.C. § 101 pursuant to the Court's Standing Order Regarding Subject Matter Eligibility Contentions. Because the Court has yet to issue a claim construction in this case and—to the extent that KAIFI contends that there are factual disputes that relate to eligibility of the asserted claims of the '518 Patent—fact and expert discovery is ongoing, these contentions are preliminary only and Defendants reserve the right to supplement or modify these contentions in accordance with the Court's Local Rules and the Docket Control Order in this case. Additionally, and in further consideration of the preliminary stage of the case, Defendants note that the pinpoint citations referenced in these charts are not exhaustive, and Defendants reserve the right to rely on additional legal case authority. Further, the citations to intrinsic and extrinsic evidence are exemplary only, and Defendants reserve the right to rely on other portions of intrinsic and extrinsic evidence not expressly cited herein, including but not limited to evidence from the prior art and evidence from the specification, claims and prosecution history of the asserted patents.

Further, these charts incorporate KAIFI's apparent interpretation of the elements within the asserted claims, as reflected in KAIFI's infringement contentions to date. Defendants do not concede that such interpretation is correct and reserves its rights to supplement these contentions accordingly.

Defendants reserve their right to supplement these contentions based on further discovery, including any supplemental infringement contentions or any interrogatory response provided by KAIFI purporting to rebut these ineligibility contentions. Defendants further reserve their right to supplement or amend these contentions based on any claim constructions provided by the Court.

Pursuant to the Court's Standing Order Regarding Subject Matter Eligibility Contentions, Defendants provide the following chart identifying each exception to eligibility (e.g., abstract idea, law of nature, and natural phenomenon) to which each Challenged Claim is directed and the factual and legal basis therefor. Defendants contend that Claim 1 of the '518 Patent is representative of the Challenged Claims 1-20, but Amazon separately sets forth herein the exception to eligibility for each.

Challenged Claims	**Exception to Eligibility, and Basis Therefor**
1. A system, comprising: multiple machines; and a relation server for storing a relation profile including a task processing schedule parameter which defines a sequence of	All of the Challenged Claims are directed to the abstract idea of assigning tasks needed to complete a request based (a) a known set of resources available to perform the tasks and (b) on the skills required to complete the task. This is and has been a well-known method for completing requests since time immemorial. For example, in a restaurant kitchen, you may have an employee working the grill, an employee working the deep-frier, and an employee working the ice-cream machine. The cashier taking orders knows what resources are available to them to prepare orders, *i.e.*, the three other employees. Upon receiving an order, the cashier prepares a receipt (*i.e.*, a relation profile) regarding what food needs to be prepared to complete the order. From the receipt, the cashier instructs the relevant employees to complete the relevant tasks according to the

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performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes, wherein the relation server generates a new relation profile based on an intervention by a user in the relation profile, wherein the task processing schedule parameter configures a start time of at least one process of the multiple processes, and wherein the multiple machines includes at least one of a home appliance, a smart phone or a search engine.	receipt and each employee's particular skills. For example, if the receipt includes two cheeseburgers and one order of French fries, the cashier will direct the grill cook to prepare two cheeseburgers, and the fry cook to prepare one order of French fries. Similarly, if an order requests one veggie burger and one ice cream cone, the cashier will direct the grill cook to prepare the veggie burger and the employee working the ice cream machine to prepare the ice cream cone. 35 U.S.C. § 101 lists four broad categories of patent-eligible subject matter, but is subject to "an important implicit exception" that "[l]aws of nature, natural phenomena, and abstract ideas," which form the "basic tools of scientific and technological work," are not eligible for patent protection. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (internal quotation marks omitted). "The 'abstract ideas' category embodies 'the longstanding rule that an idea of itself is not patentable.'" *Id.* at 209 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (quoting *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. 498 (1874)). *Alice* set forth a two-step inquiry. "First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.* at 217. In making this inquiry, the claims "must be considered as a whole." *Alice*, 573 U.S. at 218 n.3 (quoting *Diamond v. Diehr*, 450 U.S. 175, 188 (1981)). And courts consider "what the patent asserts to be the focus of the claimed advance over the prior art." *Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1168 (Fed. Cir. 2019) (cleaned up). "Instead of a definition [for abstract idea] … courts … examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided." *Amdocs (Isr.) Ltd v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016). If the claims recite an abstract idea, the second step requires a "search for an 'inventive concept'— 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.* at 218 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 73 (2016)). "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.* at 221 (quoting *Mayo*, 566 U.S. at 78) (alterations omitted). The recited "additional features must be more than well-understood, routine, conventional activity." *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 1335, 1339 (Fed. Cir. 2013) (internal quotations omitted).

Challenged Claims	Exception to Eligibility, and Basis Therefor
	Assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task is an abstract idea. First, claims directed to systems for automating processes previously performed by humans are regularly held to be directed to abstract ideas. *See, e.g.*, *Univ. of Fla. Rsch. Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1367 (Fed. Cir. 2019) ("'do it on a computer' patent[s]" that seek to "automate 'pen and paper methodologies' to conserve human resources" "are directed to abstract ideas"); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (claims directed to functions "humans have always performed" are directed to abstract ideas); *PersonalWeb Techs. LLC v. Google LLC,* 8 F.4th 1310, 1316 (Fed. Cir. 2021) (mental processes are "a telltale sign of abstraction"). In the claims at issue, a user provides a request to the relation server, for example, "turn off all lights in the bedroom," and the relation server controls the relevant machine—particularly, all of the lights in the bedroom—to complete the task based on a relation profile that defines, *inter alia*, which lights are located in the bedroom. This claims nothing more than a system for automating processes previously performed by humans. For example, in the human context, a father in a household may tell a child to turn off all of the lights in their bedroom. The child in their mind contains a mental "relation profile" defining which lights are located in their bedroom and will go to the bedroom and turn off those particular lights to complete the task. These exact types of processes have been performed by humans since long before the existence of computers to automate them. Where a patent claims "do it on a computer" system that merely automates a process previously performed by humans, as the '518 Patent does, the relevant inquiry at step one is "to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016). The relevant question is not whether the claimed system includes tangible components, but instead whether the claim is directed to improvements in such components or the components are merely "conduit[s] for the abstract idea." *Yu v. Apple, Inc.*, 1 F.4th 1040, 1043–45, 1044 n.2 (Fed. Cir. 2021). There are no asserted improvements to any computer or tangible components in the '518 Patent. Instead, the '518 Patent states plainly that its alleged advancement over the prior art is "for operating a relation server . . . which manages relations between machines that are required in order to execute externally received commands," without any description of what the relation server or machines are, let alone a description of any

Challenged Claims	Exception to Eligibility, and Basis Therefor
	improvements to such a server or machine. *See* '518 Patent at 1:44-2:62. However, as discussed above, using a known relation between machines to perform a command that requires the machines is a human activity that can be performed without the use of any computer. Because the '518 Patent merely claims a system for performing a known human process on a generic computer, its claims are directed to an abstract idea and are not patent eligible. *See, e.g.*, *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (if the "focus of the claimed advance over the prior art" shows that "the claim's character as a whole is directed to" steps that "can be performed in the human mind, or by a human using a pen and paper," the claim is directed to an abstract idea) (cleaned up). The Challenged Claims merely describe desired functions without providing any technical details, further suggesting the challenged claims are directed to an abstract idea. *See, e.g.*, *Affinity Labs of Texas, LLC v. Amazon.com, Inc*., 838 F.3d 1266 (Fed. Cir. 2016) (finding claims that did "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[]" abstract); *Univ. of Fla. Rsch. Found., Inc.*, 916 F.3d at 1368 (finding claims abstract where they "fail[ed] to provide any technical details for the tangible components, ... instead predominately describ[ing] the system and methods in purely functional terms.") Like the claims, the '518 Patent specification uses primarily functional terminology to describe the alleged invention. *See, e.g*., *Pebble Tide LLC v. Arlo Techs*., No. CV 18-1767-LPS, 2020 WL 509183, at *1 (D. Del. Jan. 31, 2020) ("This conclusion at Step One is supported by the fact that the representative claim lacks limiting technical details. Neither of the claims, nor for that matter the specification, explain[s] how the claimed invention's components perform their recited functions. Rather, they describe those components in purely functional terms."). Courts considering similar claims have routinely found them abstract (and ineligible). *See, e.g.*, *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A*., 776 F.3d 1343 (Fed. Cir. 2014) ("concept of data collection, recognition, and storage" is abstract idea); *Mobile Acuity Ltd. v. Blippar Ltd.*, 110 F.4th 1280, 1293 (Fed. Cir. 2024) ("As we have by now frequently held, claims reciting generalized steps of collecting, analyzing, and presenting information, using nothing other than the conventional operations of generic computer components, are directed to abstract ideas"); *AI Visualize, Inc. v. Nuance Commc'ns, Inc.*, 97 F.4th 1371, 1378 (Fed. Cir. 2024) (finding claims recited in functionally-oriented language that included "*storing* data . . . on a server, *accepting* user requests" and performing generic computer functions in response to request were abstract); *Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *4 (Fed. Cir. Sept. 17, 2024) (claims "directed to well-known activities that humans have long performed" including "abstract idea of identifying users in photos (e.g., tagging)," "determining associations between the users,

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	photos," "and storing an association between a user identifier and a photo identifier" were directed to abstract idea); *ChargePoint, Inc. v. SemaConnect, Inc.*, 2018 WL 1471685, at *8 (D. Md. Mar. 23, 2018), *aff'd*, 920 F.3d 759 (Fed. Cir. 2019) (claims directed to apparatus for "sending a request, receiving a command, and executing the command over a network to operate a" machine "in an expected way" were directed to abstract idea); *Uniloc USA, Inc. v. HTC Am., Inc.*, 2018 WL 3008870, at *6 (W.D. Wash. June 15, 2018), *vacated and remanded on other grounds*, 776 F. App'x 704 (Fed. Cir. 2019) ("The court concludes that because the asserted claims are directed towards the result—and therefore, abstract idea—of wirelessly controlling remote devices, they are patent-ineligible."); *Valmont Indus., Inc. v. Lindsay Corp.*, 2018 WL 5962469, at *6 (D. Del. Nov. 14, 2018) (claims that described apparatus for remotely controlled irrigation devices in purely functional terms was "directed to the abstract idea 'of remotely monitoring and controlling irrigation equipment"); *D&M Holdings Inc. v. Sonos, Inc.*, 2017 WL 1395603, at *8-9 (D. Del. Apr. 18, 2017) (claims directed to method for remotely controlling device was "directed to the automation of a process that can be (and has been) performed by humans," and thus was directed to abstract idea); *F45 Training Pty Ltd. v. Body Fit Training USA Inc.*, 2022 WL 17177621, at *7 (D. Del. Nov. 17, 2022), *dismissed*, 2023 WL 2965590 (Fed. Cir. Apr. 17, 2023) (claims directed to "server database" for storing studio information program file" defining layout of fitness studio. "communicating, by the server to a studio computer associated with the particular studio, the received studio information program file over a communications network," and "communicating, by the studio computer to the exercise station displays, dependent upon the received studio information program file" were directed to abstract idea of "storing, sending, and retrieving information over a network"); *RFC Lenders of Texas, LLC v. Smart Chem. Sols., LLC*, 2024 WL 4818807, at *6 (W.D. Tex. Aug. 6, 2024) (method for monitoring a vehicle that comprised only "result-based, functional language," including "detecting," "transmitting," and "determining" was directed to abstract idea); *USC IP P'ship, L.P. v. Facebook, Inc.*, 576 F. Supp. 3d 446, 455 (W.D. Tex. 2021), *aff'd sub nom*., 2023 WL 5606977 (Fed. Cir. Aug. 30, 2023) (claims that "only recite high-level functional language without explaining how the claimed invention improve the functionality of the computer" were directed to abstract idea); *Ficep Corp. v. Peddinghaus Corp.*, 587 F. Supp. 3d 115, 124 (D. Del. 2022), *aff'd*, 2023 WL 5346043 (Fed. Cir. Aug. 21, 2023) (claims were directed to abstract idea where the "improvements described in the specification appear to originate exclusively with the removal of human operators, achieved via the abstract idea");. To the extent this abstract idea is considered more than one such ideas, the combination of these abstract ideas does not render Claim 1 any less abstract. *See Sensormatic Elecs., LLC v. Wyze Labs, Inc.*, 484 F. Supp. 3d 161, 165 (D. Del. 2020), *aff'd*, No. 2020-2320, 2021 WL 2944838 (Fed. Cir. July 14, 2021) ("Courts often invalidate patents that are directed to a combination of abstract ideas.") (citing cases); *Broadband iTV, Inc. v. Amazon.com, Inc.*, No. 6:20-CV-00921-ADA, 2022 WL 4703425, at *14 ("Combing two abstract ideas . . . is

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	not inventive."); *RecogniCorp. LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) ("Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract."); *Consumer 2.0, Inc. v. Tenant Turner, Inc.*, 343 F. Supp. 3d 581, 590-91 (E.D. Va. 2018), *aff'd* 796 F. App'x 752 (Fed. Cir. 2020) ("[T]he mere combination of these abstract processes is insufficient to bring the patent-at-issue out of the realm of the abstract.") (citing cases). Claim 1 of the '518 Patent does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "stroing a relation profile," a "task processing schedule parameter . . . defin[ing] a sequence of performing multiple processes," "requesting selected machines of the multiple machines," "generat[ing] a new relation profile based on a user intervention," and "configure[ing] a start time of at least one process." But the '518 Patent does not provide any meaningful explanation of how those functions are achieved. *See, e.g., AI Visualize, Inc.*., 97 F.4th at 1378 (claims that "recite a system that includes [] functionally-oriented steps" were directed to abstract idea) At best, Claim 1 seeks to implement the abstract idea(s) using a generic computer elements. But "[i]nstructing one to 'apply' an abstract idea and reciting no more than generic computer elements performing generic computer tasks does not make an abstract idea patent-eligible." *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1368 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2359-60). The '518 Patent does not describe the claimed system or any of its components, including the relation server or any one of the multiple machines, in a meaningful way. Accordingly, there is nothing in the specification to suggest that the claimed relation server or machines are more than generic, off the rack structures well known in the art. If any of them *were* something more, the '518 Patent would need to explain that, and it does not. Again, the '518 Patent states plainly that its alleged advancement over the prior art is "for operating a relation server . . . which manages relations between machines that are required in order to execute externally received commands," without any description of what the relation server or machines are, let alone a description of any *improvements* to such a server or machine. *See* '518 Patent at 1:44-2:62. *See, e.g.*, *In re TLI Commc'ns LLC*, 823 F.3d at 612 ("[T]he claims here are not directed to a specific improvement to computer functionality. Rather, they are directed to the use of conventional or generic technology in a nascent but well-known environment, without any claim that the invention reflects an inventive solution to any problem presented"). Indeed, during prosecution of the application that led to the '518 Patent, the examiner found that the application's claim 1—which recited a method to operate a relation server with substantially the same functionality as the system claimed in claim 1 of the '518 patent—was invalid as directed to an abstract idea

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	because the claim "cover[ed] performance of the limitation in the mind or with pen and paper but for the recitation of generic computer components." KAIFI00000001 at 70-72.[1] While the examiner allowed the claim once it was amended from a method to a system claim, Federal Circuit case law clearly holds the opposite: even if a claim is one for an apparatus, a claim directed to generic computer components for performing operations that could be done in the mind or with pen and paper is directed to an abstract idea. *E.g.*, *Univ. of Fla. Rsch. Found., Inc.*, 916 F.3d 1363 at 1367 (Fed. Cir. 2019) ("'do it on a computer' patent[s]" that claim a system that "automate[s] 'pen and paper methodologies' to conserve human resources" "are directed to abstract ideas"). The '518 Patent admits that systems for managing multiple connected machines within an environment were well known in the art at the time of the patent, and that its systems and methods were to be implemented on nothing more than generic computer components. For example: '518 Patent at 1:33-37: Recently, systems for connecting machines through a network and sharing information between the machines have been applied to various fields, such as health care, telemetry, smart homes, and smart cars, as well as household appliances and electronic devices. '518 Patent at 10:65-11:21: The method according to the embodiments may be implemented as a program that can be executed by various computer means. In this case, the program may be recorded on a computer-readable storage medium. The computer-readable storage medium may include program instructions, data files, and data structures solely or in combination. Program instructions recorded on the storage medium may have been specially designed and configured for the present disclosure, or may be known to or available to those who have ordinary knowledge in the field of computer software. Examples of the computer-readable storage medium include all types of hardware devices specially configured to record and execute program instructions, such as magnetic media, such as a hard disk, a floppy disk, and magnetic tape, optical media, such as compact disk (CD)-read only memory (ROM) and a digital versatile disk (DVD), magneto-optical media, such as a floptical disk, ROM, random access memory (RAM), and flash memory. Examples of the program instructions include machine language code,

[1] Notably, the examiner failed to provide any analysis regarding the § 101 subject matter eligibility issue after the applicant converted the rejected method claim 1 into the system claimed in claim 1 of the '518 patent. *See* KAIFI00000001 at 124-26.

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	such as code created by a compiler, and high-level language code executable by a computer using an interpreter. The hardware devices may be configured to operate as one or more software modules in order to perform the operation of the present disclosure, and vice versa. Moreover, this claim would preempt the broad subject matter of any system wherein a server controls multiple machines based on stored information about relationships between the machines. This further suggests that the claims are directed to an abstract idea and patent-ineligible subject matter. *See, e.g.*, *Bancorp Servs., LLC v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1280 (Fed. Cir. 2012) (finding that claimed abstract idea would improperly preempt broad subject matter). The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
2. The system of claim 1, wherein: a first machine of the multiple machines forwards a command received from the user to the relation server, the relation server controls the selected machines for performing the multiple processes according to the command, and	Like claim 1, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 2 adds the additional abstract idea of forwarding the request from a first machine, wherein the first machine is also one of the machines assigned to perform a task to complete the request. Like claim 1, the subject matter of claim 2 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn off all of the lights in the bedroom." Also like claim 1, forwarding the command from a first machine and having the first machine execute one of the processes to complete the command is not an improvement in computer capabilities, and claim 2 merely describes desired functions without providing any technical details.

Challenged Claims	Exception to Eligibility, and Basis Therefor
the selected machine includes the first machine.	Claim 2 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "forward[ing] a command received from the user to the relation server" and "control[ing] the selected machines." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how a command is forwarded from the first machine, nor how the relation server controls any of the selected machines. At best, claim 2 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
3. The system of claim 2, wherein: the command includes a reservation or a payment.	Like claim 2, this claim is directed to the abstract idea(s) of this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. *See supra* claims 1, 2. Claim 3 merely clarifies that the request at issue is one for a reservation or a payment. Like claims 1 and 2, the subject matter of claim 3 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices. For example, if one person told another to "pay the credit card bill," the person would understand the request to require going to the computer, logging into a banking website, and paying the bill. Also like claims 1 and 2, a command that

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	includes a reservation or a payment is notan improvement in computer capabilities, and claim 3 merely describes desired functions without providing any technical details. Claim 3 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as a command "includ[ing] a reservation or a payment." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not meaningfully describe any command, let alone how a command may include a reservation or payment. At best, claim 3 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
4. The system of claim 2, wherein: the relation profile includes a capability set parameter, and the capability set parameter corresponds to information about capabilities required for performing the command.	Like claim 2, this claim is directed to the abstract idea(s) of this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. *See supra* claims 1, 2. Claim 4 merely adds that the relation profile includes a capability parameter regarding the capabilities required for performing the command. Like claims 1 and 2, the subject matter of claim 4 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices. For example, if one person told another to "make the room colder," the person would understand the request to require interacting

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	with a device with the capabilities of causing the room to be cooled, such as a thermostat or an air conditioning unit. Also like claims 1 and 2, a parameter that corresponds to information about capabilities required for performing a command is not an improvement in computer capabilities, and claim 4 merely describes desired functions without providing any technical details. Claim 4 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as a command "includ[ing] a capability set parameter" in a relation profile and "correspond[ing] to information about capabilities required for performing the command." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not meaningfully describe how the capability set parameter is included in the relation profile" or how the capability set parameter "corresponds to information about capabilities required for performing the command." At best, claim 4 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
5. The system of claim 2, wherein: the relation profile includes a group parameter, and	Like claim 2, this claim is directed to the abstract idea(s) of this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. *See supra* claims 1, 2. Claim 5 merely adds that the relation profile includes a group parameter regarding the identities of machines required for performing the command.

Challenged Claims	Exception to Eligibility, and Basis Therefor
the group parameter corresponds to identities of machines required for performing the command.	Like claims 1 and 2, the subject matter of claim 5 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices. For example, if one person told another to "turn off the lights in the bedroom," the person would understand the request to require turning off the group of devices that are lights located in the bedroom. Also like claims 1 and 2, a parameter that corresponds to identities of machines required for performing the command is not an improvement in computer capabilities, and claim 5 merely describes desired functions without providing any technical details. Claim 5 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as a command "includ[ing] a group parameter" in a relation profile and "correspond[ing] to identities of machines required for performing the command." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not meaningfully describe how the group parameter is included in the relation profile" or how the group parameter "corresponds to identities of machines required for performing the command." At best, claim 5 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
6. The system of claim 2, wherein:	Like claim 2, this claim is directed to the abstract idea(s) of this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. *See supra* claims 1, 2. Claim 6 merely adds that the

Challenged Claims	Exception to Eligibility, and Basis Therefor
the relation profile includes a group identity parameter, and the group identity parameter corresponds to an identity of a group consisting of machines required for performing the command.	relation profile includes a group identity parameter regarding the identity of a group consisting of machines required for performing the command. Like claims 1 and 2, the subject matter of claim 6 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices. For example, if one person told another to "turn off the lights in the bedroom," the person would understand the request to require turning off the group of devices that are lights located in the bedroom. Also like claims 1 and 2, a parameter that corresponds to an identity of a group consisting of machines required for performing the command is not an improvement in computer capabilities, and claim 6 merely describes desired functions without providing any technical details. Claim 6 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as a command "includ[ing] a group identity parameter" in a relation profile and "correspond[ing] to an identity of a group of machines required for performing the command." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not meaningfully describe how the group identity parameter is "included in the relation profile" or how the group identity parameter "corresponds to an identity of a group consisting of machines required for performing the command." At best, claim 6 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).

Challenged Claims	Exception to Eligibility, and Basis Therefor
7. The system of claim 2, wherein: the relation profile includes a task description parameter, the task description parameter corresponds to information related to the command, and the information is saved in a form of text.	Like claim 2, this claim is directed to the abstract idea(s) of this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. *See supra* claims 1, 2. Claim 7 merely adds that the relation profile includes a task description parameter regarding information related to the command that is saved in a form of text. Like claims 1 and 2, the subject matter of claim 7 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices. For example, if one person told another to "turn off the lights in the bedroom," the person would understand the request to require turning off the group of devices that are lights located in the bedroom, and the request would include a description of the task, particularly, to turn off the lights in the bedroom. Also like claims 1 and 2, a parameter that corresponds to information related to the command that is saved in a form of text is not an improvement in computer capabilities, and claim 7 merely describes desired functions without providing any technical details. Claim 7 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as a command "includ[ing] a task description parameter" in a relation profile and "correspond[ing] to information related to the command," and "sav[ing] in a form of text." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not meaningfully describe how the task description parameter is "included in the relation profile," or it "corresponds to information related to the command," or how it is "saved in a form of text." At best, claim 7 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions.

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	Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
8. The system of claim 1, wherein: the task processing schedule parameter includes a sub-parameter configuring a start condition of at least one process of the multiple processes, or a sub-parameter configuring an allocated machine identity of at least one process of the multiple processes.	Like claim 1, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 8 merely adds that the task processing schedule parameter includes a sub-parameter configuring a start condition of at least one process, or a sub-parameter configuring an allocated machine identity of at least one process. Like claim 1, the subject matter of claim 8 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm." Also like claim 1, the sub-parameters claimed in claim 8 are not improvements in computer capabilities, and claim 8 merely describes desired functions without providing any technical details. Claim 8 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "includ[ing] a sub-parameter," "configuring a start condition of at least one process," and "configuring an allocated machine identity of at least one process." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how any sub parameter is included in the task processing schedule parameter, or how any sub-parameter may "configur[e] a start condition" or "configur[e] an allocated machine identity." At best, claim 8 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at

Challenged Claims	Exception to Eligibility, and Basis Therefor
	each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
9. The system of claim 1, wherein: the relation server stores multiple machine profiles of the multiple machines.	Like claim 1, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 9 merely adds that the relation server stores multiple machine profiles. Like claim 1, the subject matter of claim 9 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm." Moreover, the person requested to do the task keeps a mental "machine profile" that identifies the various machines that are lights in the living room. Also like claim 1, the machine profiles claimed in claim 9 is not an improvement in computer capabilities, and claim 9 merely describes desired functions without providing any technical details. Claim 9 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "stor[ing] multiple machine profiles." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain what any "relation server" is, let alone how a "relation server stores multiple machine profiles." At best, claim 9 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at

Challenged Claims	Exception to Eligibility, and Basis Therefor
	each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
10. The system of claim 9, wherein: at least one machine profile of the multiple machine profiles includes a status parameter, and the status parameter includes at least one sub-parameter of a current operation status sub-parameter, a current availability sub-parameter, a current process sub-parameter, a scheduled termination time of current process sub-parameter, a current execution function sub-parameter, or a scheduled termination time of currently executed function sub-parameter.	Like claim 9, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 10 merely adds that the machine profiles include a status parameter, which itself includes at least one sub-parameter regarding current operation status, current availability, a current process, a scheduled termination time of the current process, a current execution function, or a scheduled termination time of a currently executed function. Like claims 1 and 9, the subject matter of claim 10 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claims 1 and 9, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Also like claims 1 and 9, the status parameter and sub-parameters claimed in claim 10 are not improvements in computer capabilities, and claim 10 merely describes desired functions without providing any technical details. Claim 10 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "include[ing] a status parameter" and "includ[ing] at least one sub-parameter." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how a "status parameter" is "include[ed]" in a machine profile or how the status parameter "includes at least one sub-parameter." At best, claim 10 seeks to implement the abstract idea(s) using generic computer equipment.

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	The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
11. The system of claim 9, wherein: at least one machine profile of the multiple machine profiles includes a capability parameter, and the capability parameter includes at least one sub-parameter of a title of process sub-parameter, an input parameter sub-parameter, an output parameter sub-parameter, a process processing time sub-parameter, a process processing condition sub-parameter, or a function sub-parameter.	Like claim 9, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 11 merely adds that the machine profiles include a capability, which itself includes at least one sub-parameter regarding a title of a process, an input, an output, a process processing time, a process processing condition, or a function. Like claims 1 and 9, the subject matter of claim 11 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claims 1 and 9, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Also like claims 1 and 9, the capability parameter and sub-parameters claimed in claim 11 are not improvements in computer capabilities, and claim 11 merely describes desired functions without providing any technical details. Claim 10 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "include[ing] a capability parameter" and "includ[ing] at least one sub-parameter." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how a "capability parameter" is "include[ed]" in a machine profile or how the capability parameter "includes at least one sub-parameter."

Challenged Claims	Exception to Eligibility, and Basis Therefor
	At best, claim 11 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
12. The system of claim 9, wherein: at least one machine profile of the multiple machine profiles includes a machine identity parameter.	Like claim 9, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 12 merely adds that the machine profiles includes a machine identity parameter. Like claims 1 and 9, the subject matter of claim 12 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claims 1 and 9, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Also like claims 1 and 9, the machine identity parameter in claim 12 is not an improvement in computer capabilities, and claim 12 merely describes desired functions without providing any technical details. Claim 12 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "includ[ing] a machine identity parameter." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how a "machine identity parameter" is "include[ed]" in a machine profile. At best, claim 12 seeks to implement the abstract idea(s) using generic computer equipment.

Challenged Claims	Exception to Eligibility, and Basis Therefor
	The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
13. The system of claim 9, wherein: at least one machine profile of the multiple machine profiles includes a user identity parameter, and the user identity parameter corresponds to an identity of a user being capable of using a machine corresponding to the at least one machine profile.	Like claim 9, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 13 merely adds that the machine profiles includes a user identity parameter corresponding to an identity of a user being capable of using a machine. Like claims 1 and 9, the subject matter of claim 13 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claims 1 and 9, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Moreover, it is common human behavior to classify machines by who may or may not use them. For example, all members of a family may be able to use the lights located in the living room, but only parents and not children may be able to use an oven or stove. Also like claims 1 and 9, the user identity parameter in claim 13 is not an improvement in computer capabilities, and claim 13 merely describes desired functions without providing any technical details. Claim 13 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "includ[ing] a user identity parameter," "correspond[ing] to an identity of a user capable of using a machine," and "corresponding to the at least one machine profile." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how a "user identity

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	parameter" is "include[ed]" in a machine profile or how the user identity parameter "corresponds to an identity of a user being capable of using a machine." At best, claim 13 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
14. The system of claim 9, wherein: at least one machine profile of the multiple machine profiles includes a group identity parameter, and the group identity parameter corresponds to an identity of a user group being capable of using a machine corresponding to the at least one machine profile.	Like claim 9, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 14 merely adds that the machine profiles includes a group identity parameter corresponding to an identity of a user group being capable of using a machine. Like claims 1 and 9, the subject matter of claim 14 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claims 1 and 9, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Moreover, it is common human behavior to classify machines by groups of people who may or may not use them. For example, all members of a family may be able to use the lights located in the living room, but only the group parents and not the group children may be able to use an oven or stove. Also like claims 1 and 9, the group identity parameter in claim 14 is not an improvement in computer capabilities, and claim 14 merely describes desired functions without providing any technical details.

Challenged Claims	Exception to Eligibility, and Basis Therefor
	Claim 14 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "includ[ing] a group identity parameter," "correspond[ing] to an identity of a user group capable of using a machine," and "corresponding to the at least one machine profile." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how a "group identity parameter" is "include[ed]" in a machine profile or how the group identity parameter "corresponds to an identity of a user group being capable of using a machine." At best, claim 14 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
15. The system of claim 8, wherein: at least one machine profile of the multiple machine profiles includes an operating system parameter, and the operating system parameter corresponds to a type of an operating system which is used by a machine corresponding to the at least one machine profile.	Like claim 9, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 15 merely adds that the machine profiles includes an operating system parameter corresponding to a type of an operating system used by a machine. Like claims 1 and 9, the subject matter of claim 15 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claims 1 and 9, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Also like claims 1 and 9, the operating system parameter in claim 15 is not an improvement in computer capabilities, and claim 15 merely describes desired functions without providing any technical details.

Challenged Claims	Exception to Eligibility, and Basis Therefor
	Claim 15 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "includ[ing] an operating system parameter," "correspond[ing] to a type of an operating system which is used by a machine," and "corresponding to the at least one machine profile." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how an "operating system parameter" is "include[ed]" in a machine profile or how the operating system parameter "corresponds to an operating system." At best, claim 15 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
16. The system of claim 8, wherein: at least one machine profile of the multiple machine profiles includes an interface parameter, and the interface parameter corresponds to an interface protocol between the relation server and a machine	Like claim 9, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 15 merely adds that the machine profiles includes an interface parameter corresponding to an interface protocol between the relation server and a machine. Like claims 1 and 9, the subject matter of claim 16 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claims 1 and 9, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Also like

Challenged Claims	Exception to Eligibility, and Basis Therefor
corresponding to the at least one machine profile.	claims 1 and 9, the interface parameter in claim 16 is not an improvement in computer capabilities, and claim 16 merely describes desired functions without providing any technical details. Claim 16 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "includ[ing] an interface parameter," "correspond[ing] to an interface protocol between the relation server and a machine," and "corresponding to the at least one machine profile." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how an "interface parameter" is "include[ed]" in a machine profile or how the interface parameter "corresponds to an interface protocol between the relation server and a machine." At best, claim 16 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
17. The system of claim 1, wherein: the relation server saves information related to grouping the multiple machines.	Like claim 1, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 17 merely adds that the relation server saves information related to grouping the multiple machines. Like claim 1, the subject matter of claim 17 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm."

Challenged Claims	Exception to Eligibility, and Basis Therefor
	Moreover, the person performing such a request would contain in their mind information related to grouping the multiple machines, such as knowing which lights make up the group of lights that are in the living room. Also like claim 1, the saving information related to grouping the multiple machines is not an improvement in computer capabilities, and claim 17 merely describes desired functions without providing any technical details. Claim 17 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "sav[ing] information," "relat[ing] to grouping the multiple machines," and "grouping the multiple machines." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how the relation server "saves information," the saved information "relate[s] to grouping the multiple machines," or how to "group[] the multiple machines." At best, claim 17 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
18. The system of claim 1, wherein: the relation server generates a capability set required to execute a user command, and generates the task processing schedule parameter	Like claim 1, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 18 merely adds that the relation server generates a capability set and a task processing schedule parameter. Like claim 1, the subject matter of claim 18 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-

Challenged Claims	Exception to Eligibility, and Basis Therefor
according to the capability set, a status parameter of at least one machine of the multiple machines, and a capability parameter of the at least one machine.	known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Also like claim 1, generating the capability set and task processing schedule parameter is not an improvement in computer capabilities, and claim 18 merely describes desired functions without providing any technical details. Claim 18 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "generat[ing] a capability set" and "generat[ing] the task processing schedule parameter." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how the relation server "generates a capability set," "generates the task processing schedule parameter," or how the generation of the task processing schedule parameter is "according to the capability set, a status parameter of at least one machine of the multiple machines, and a capability parameter of the at least one machine." At best, claim 18 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
19. The system of claim 1, wherein:	Like claim 1, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 19 merely adds that the intervention of a user includes selecting some processes.

Challenged Claims	Exception to Eligibility, and Basis Therefor
the intervention includes selecting some processes of the multiple processes.	Like claim 1, the subject matter of claim 19 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Also like claim 1, a user intervention including selecting some processes is not an improvement in computer capabilities, and claim 19 merely describes desired functions without providing any technical details. Claim 19 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "includ[ing] selecting some processes" and "selecting some processes of the multiple processes." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how the intervention "includes selecting some processes" or how a user "select[s] some processes of the multiple processes." At best, claim 19 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).
20. The system of claim 1, wherein: the intervention includes approving the multiple processes.	Like claim 1, this claim is directed to the abstract idea of assigning tasks needed to complete a request based on (a) a known set of resources available to perform the tasks and (b) the skills required to complete the task. Claim 20 merely adds that the intervention of a user includes approving multiple processes.

Challenged Claims	Exception to Eligibility, and Basis Therefor
	Like claim 1, the subject matter of claim 20 is merely an automation of a task that can and has been performed by humans via generic computer components. As described with respect to claim 1, it is a well-known human process for one person to request that another control some number of devices, where the devices to-be controlled are determined based on a known relation between the devices, such as telling someone to "turn all the lights in the living room on at 5:00 pm, and leave them on until 11:00 pm." Also like claim 1, a user intervention including approving some processes is not an improvement in computer capabilities, and claim 20 merely describes desired functions without providing any technical details. Claim 20 does not contain an inventive concept such that it does more than claim ineligible ideas. Instead, it recites only broad and result-based aspirational and functional language such as "includ[ing] approving the multiple processes" and "approving the multiple processes." But the '518 Patent does not provide any meaningful explanation of how those functional steps are to be achieved. For example, the '518 Patent does not explain how the intervention "includes approving the multiple processes" or how a user "approv[es] the multiple processes." At best, claim 20 seeks to implement the abstract idea(s) using generic computer equipment. The functions and generic structures recited in this claim were all well-known, routine, and conventional in the art, as shown in greater detail in this chart and the chart below and as further shown in each of the references listed in Defendants' Invalidity Contentions Cover Pleading, provided concurrently herewith, at each "List B" associated with a claim limitation included in this claim of the '518 Patent, and as charted in the corresponding claim charts submitted with Defendants' Invalidity Contentions. Thus, either "individually" or "as an ordered combination," the elements of this claim do not add enough to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1297-98).

Pursuant to the Court's Standing Order Regarding Subject Matter Eligibility Contentions, Defendants provides the following chart identifying a description of the industry at the relevant time in which the Challenged Claims are alleged to be well understood, routine, and conventional, and the factual and legal basis therefore; and a description of how each element of each Challenged Claim, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time, and the legal and factual basis therefor.

Description of Industry, at Relevant Time, in Which the Claim is Well-Understood, Routine, and Conventional, and Basis Therefor
The Challenged Claims of the '518 Patent cover the system equivalent of a person turning all of the lights on in a room after another person told them to "Turn on all of the lights in the living room." The abstract ideas of the Challenged Claims are not far removed from a parent telling their child to be sure to turn off the lights in their bedroom when they exit the room. It is "a broad and familiar concept [in the realm of organizing human activity] that is untethered to any specific or concrete way of implementing it." *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016). Such a concept was well-known well before KAIFI's claimed priority date for the '518 Patent of November 3, 2015. Humans have sought to automate control of electronic devices for almost as long as we have had electronic devices. For example, in 1945—seventy years before the '518 Patent's alleged priority date—a U.S. company called Intermatic introduced the first electric switch controlled by a timer: the Inter-Matic. *See* https://www.intermatic.com/Userfiles/resources/catalogs/intermatic-corporate-overview.pdf at 5. By 1952, Intermatic had developed a version of the switch for consumer use called the "Time-All." The Time-All allowed a user to control when various household lights and devices turned on or off based on the switches built-in timer. *See* https://web.archive.org/web/20190705215803/https://www.intermatic.com/en/company/history. The Time-All was so successful and ubiquitous that Intermatic was still selling a version of the switch as late as 2019. *See* https://web.archive.org/web/20190705215803/https://www.intermatic.com/en/company/history. Even these earliest examples of home/building automation devices include many of the features claimed by the '518 Patent, such as *defining a sequence of performing multiple processes—e.g.*, multiple devices on multiple Time-All switches will switch off in a sequence based on when their respective timers expire; *configuring a start time of at least one process—e.g.*, the Time-All switches configured a start time of the shut off process based on how long the user set the timer for; and *wherein the multiple machines controls includes at least one of a home appliance—e.g.*, the Time-All switches were particularly designed for consumer use with home appliances. By the time of the advent of the internet in 1989, inventors and corporations were already developing network-connected devices and centralized controllers for controlling them. In 1990—just one year after the commonly-accepted birth of the internet—the first connected, or Internet of Things ("IoT"), device was born: the Interop Internet Toaster. *See The Toast of the IoT: The 1990 Interop*

Internet Toaster. The toaster was simple: it consisted of a Sunbeam Radiant Control toaster, a switch connected to an internet-connected computer and the toaster, and a bit of code that enabled a user to remotely turn the toaster on and off and control the amount of power the toaster received, and thus the level of "doneness" of their toast. *The Toast of the IoT: The 1990 Interop Internet Toaster* at 2-4. However, despite its simplicity, the Interop Internet Toaster already included many of the features the '518 Patent attempts to claim in the Challenged Claims. For example, the Interop Internet Toaster's code included *machine identity parameters*, including, for example, variables toasterModelNumber and toasterManufacturer. *See The Toast of the IoT: The 1990 Interop Internet Toaster* at 3. The Toaster's code also included *task description parameters*, including, for example, a description of the toasterDoneness function as the "variable [that] controls how well done ensuing toast should be on a scale of 1 to 10." *See The Toast of the IoT: The 1990 Interop Internet Toaster* at 3. And the Toaster's code included *process processing condition sub-parameters*, including, for example, a toasterToastType that defined the type of material being toasted, from white bread to frozen waffles. *See The Toast of the IoT: The 1990 Interop Internet Toaster* at 3.

By 1996—almost twenty years before the '518 Patent's alleged priority date—centralized controllers for multiple networked devices in an environment had not only been invented, but were also on the market and were well known in the home/building automation industry. For example, U.S. Patent No. 5,904,442 ("Mosebrook '442"), whose application was filed in 1996, taught a "control system for controlling electrical devices such as electric lamps from remote locations through communication locations." Mosebrook '442 at 1:9-11. Mosebrook '442 describes "a master control device 20 . . . having a plurality of controls and status indicators 22 which control various control devices assigned to the various control buttons." Mosebrook '442 at 11:29-33. The control buttons are further programmed to remotely control lights located in different room; for example, in the embodiment shown in Mosebrook '442's FIG. 9A below "the master control 30 includes a plurality of control buttons. In the embodiment shown, there are five control buttons 31 assigned to each of the five rooms in the house. The remaining two buttons 33 allow the user to turn all controlled lamps on or all controlled lamps off simultaneously." Mosebrook '442 at 16:64-17:5.

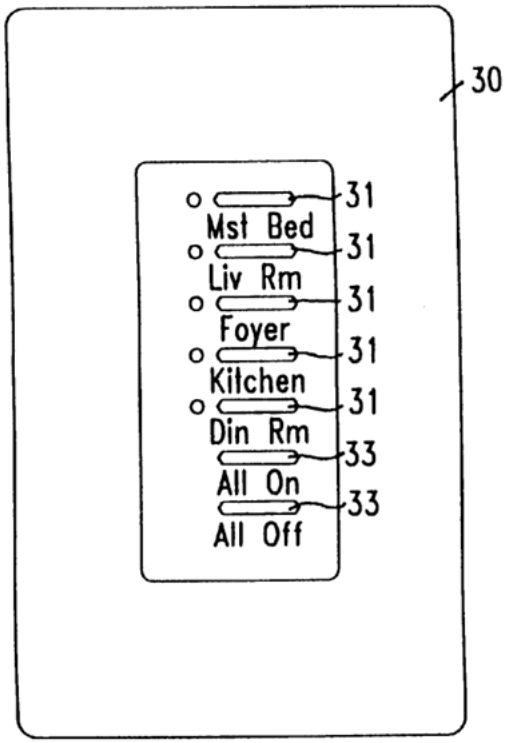


FIG. 9A

Further, Mosebrook ’442’s 1996 device was reprogrammable such that it could control different arrangements of electronic devices. Mosebrook ’442 discloses that “the association of the electrical control devices to a particular control on the master unit is freely programmable by the user.” Mosebrook ’442 at 2:19-22. Mosebrook ’442 further discloses that at the time of its application, centralized controllers with substantially the same functionality as the ones it disclosed were already commercially available; its assignee had already been selling a “Maestro line” of devices capable of centrally controlling multiple lights that were simply wired rather than wireless. Mosebrook ’442 at 12:25-30.

By 2001, centralized controllers for controlling devices within an environment had already advanced from controlling simple devices, such as turning lamps on and off or controlling a toaster, to controlling more complex machines such as audio video equipment. Christensen ’764, filed on April 10, 2001, describes “a wireless home automation system having a controller for controlling a broad variety of functions via two ways communication with a plurality of devices.” WIPO Patent App. Pub. WO 01/77764 (“Christensen ’764”) at Abstract. Further, like the relation profiles claimed by the ’518 Patent’s challenged claims, Christensen ’764 disclosed fourteen years earlier that its controllers stored “information related to the system” including, for example, “device identifiers of devices controlled by the [] controller.” Christensen ’764 at Abstract. Christensen ’764 even taught creating new relation profiles based on intervention by a user. For example, Christensen’s Figure 21, shown below, discloses “a flow diagram showing the procedure for creating a mood on the controller” wherein a user “select[s] devices to include in the mood” and the devices “transmit [their] current dim level to the controller” so that the controller may save a profile including (1) the devices to be controlled and (2) the dimness to set each device to when the mood is activated. Christensen ’764 at 14:4-5, 42:24-43:2.

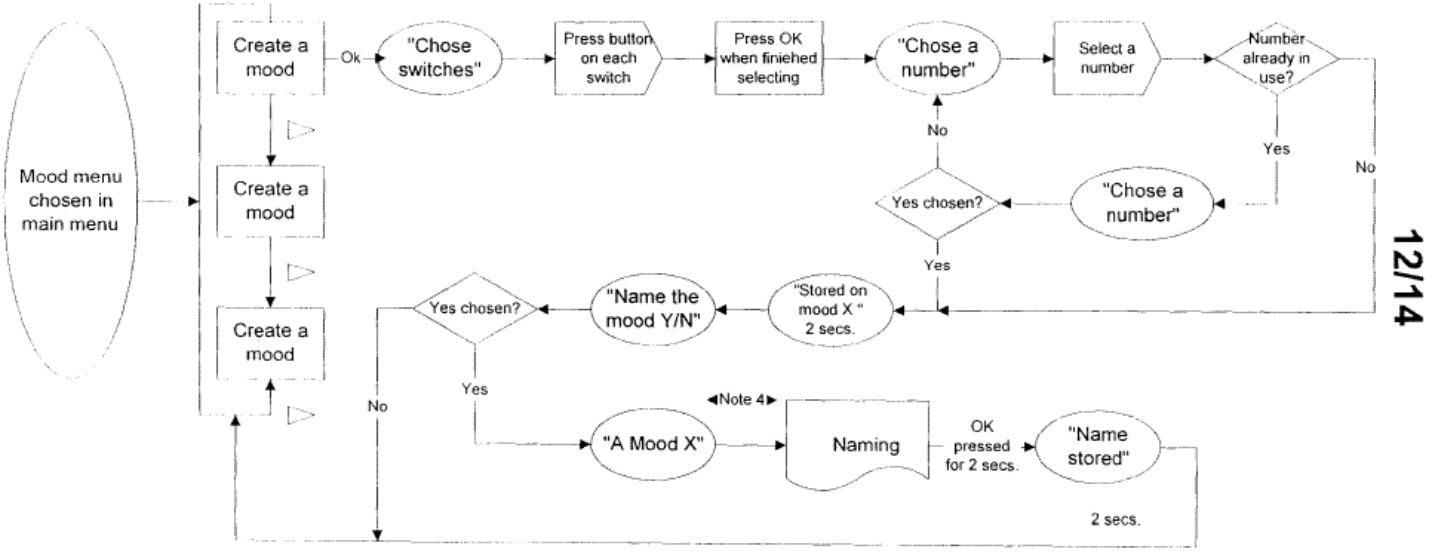


Fig. 21

Christensen ’764 further noted that it was not the first disclosure of the idea of a centralized controller for controlling multiple network enabled devices in an environment. Indeed, Christensen ’764 discloses that at the time of its application, “[h]ome automation systems for controlling devices with various functions such as lighting and audio equipment with a building ha[d] [already] evolved towards a ‘smart-home concept,’ where different input/output (I/O) devices with a wide range of functions are remotely controlled by a central controller.” Christensen ’764 at 1:10-13.

By the mid-2000s, the industry had fully crystallized the idea of centralized controllers for home/building automation, and robust, fully featured programmable systems were well known in the industry.

For example, U.S. Patent App. Pub. No. 2006/0028212 (“Steiner ’212”), which was filed in 2004 and published in 2006, discloses a system that provides “substantially real-time control of a graphically selected group of electrical/electronic devices” and enabled “users of the present invention [to] schedule commands to be executed for a group of graphically selected electrical/electronic devices, or command a group of graphically selected electrical/electronic devices to respond to a particular condition.” Steiner ’212 at Abstract. While Steiner ’212 purported to provide an improved graphical system for grouping and controlling groups of electrical devices, it acknowledged that by 2004, “[r]emote control and monitoring of electrical/electronic devices, such as lighting control systems, [was] known.” Steiner ’212 at [0004]. Steiner ’212 further demonstrates that the limitations of the ’518 Patent’s claims were well understood, routine, and conventional well before the ’518 Patent’s priority date.

For example, Steiner ’212’s system included *multiple machines*[1], including “a plurality of electrical/electronic devices,” Steiner ’212 at [0002], including, for example, “electrical/electronic device 108A [which] represents a lighting fixture, electrical/electronic device 108B [which] represents an HVAC system, and electrical/electronic device 108C [which] represents an audio system.”

[1] Certain claim elements of the Challenged Claims are identified as being indefinite under 35 U.S.C. Section 112 throughout Defendants’ Invalidity Contentions. If the Court were to find these claim terms were not indefinite, then the claim terms were well understood, routine, and conventional, in the relevant industry at the relevant time. Particularly, while KAIFI has avoided taking positions in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy the indefinite claim terms, such claim terms as KAIFI appears to interpret them in its Infringement Contentions were well understood, routine, and conventional, in the relevant industry at the relevant time.

Steiner ’212 at Figure 1

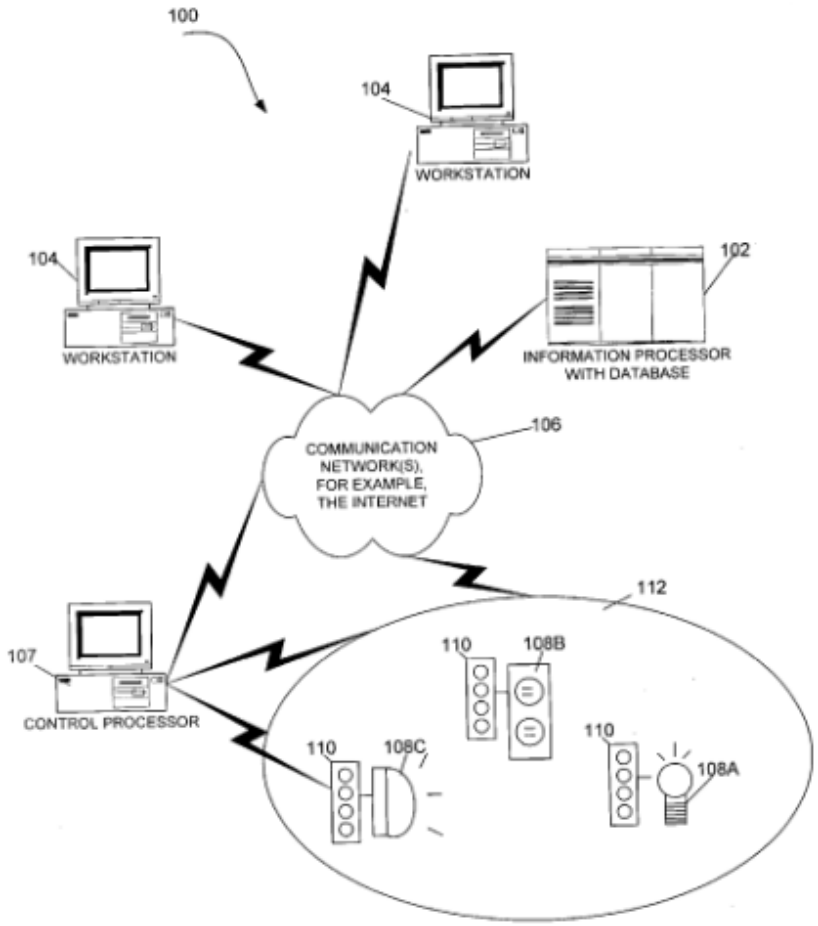


Fig. 1

Steiner ’212’s system further included a *relation server for storing a relation profile including a task processing schedule parameter which defines a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes*. For example, Steiner ’212’s system included an “information processor 102” that stored “an internal array structure . . . used by information processor 102 to store contents and information of the group being

defined," where the group is a group of devices to be controlled. Steiner '212 at [0118]. Steiner '212's system was not only capable of grouping the devices and "provid[ing] substantially real-time control of groups of electrical/electronic devices," Steiner '212 at [0027], but also enabled a user to "schedule commands to be executed for a group of electrical/electronic devices, or command a group of electrical/electronic devices to respond to a particular condition." Steiner '212 at [0011].

Steiner '212's system also caused its *relation server to generate a new relation profile based on an intervention by a user in the relation profile* and its *relation server saved information related to grouping the multiple machines*. For example, Steiner '212 grouped its devices into zones, and enabled users to group devices together by adding their respective zones to a group, and then such groups were saved to information processor 102's database, as shown in Steiner '212's Figure 8C and Figure 10 below.

Steiner ’212 at Figure 8C

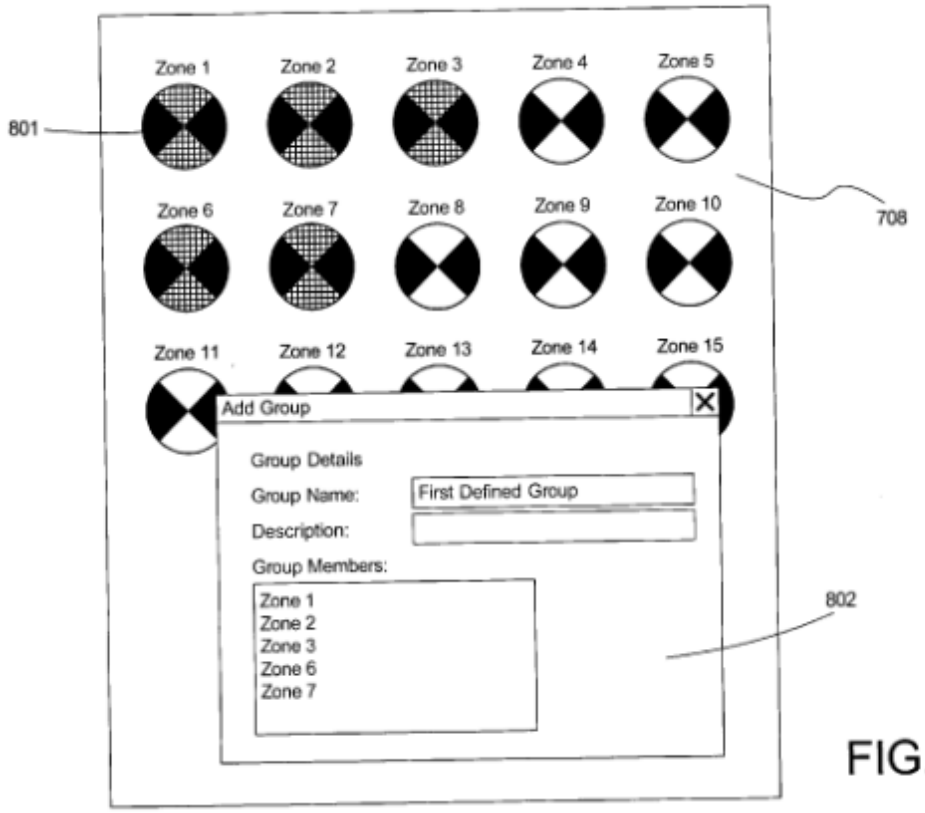


FIG. 8C

Steiner ’212 at Figure 10

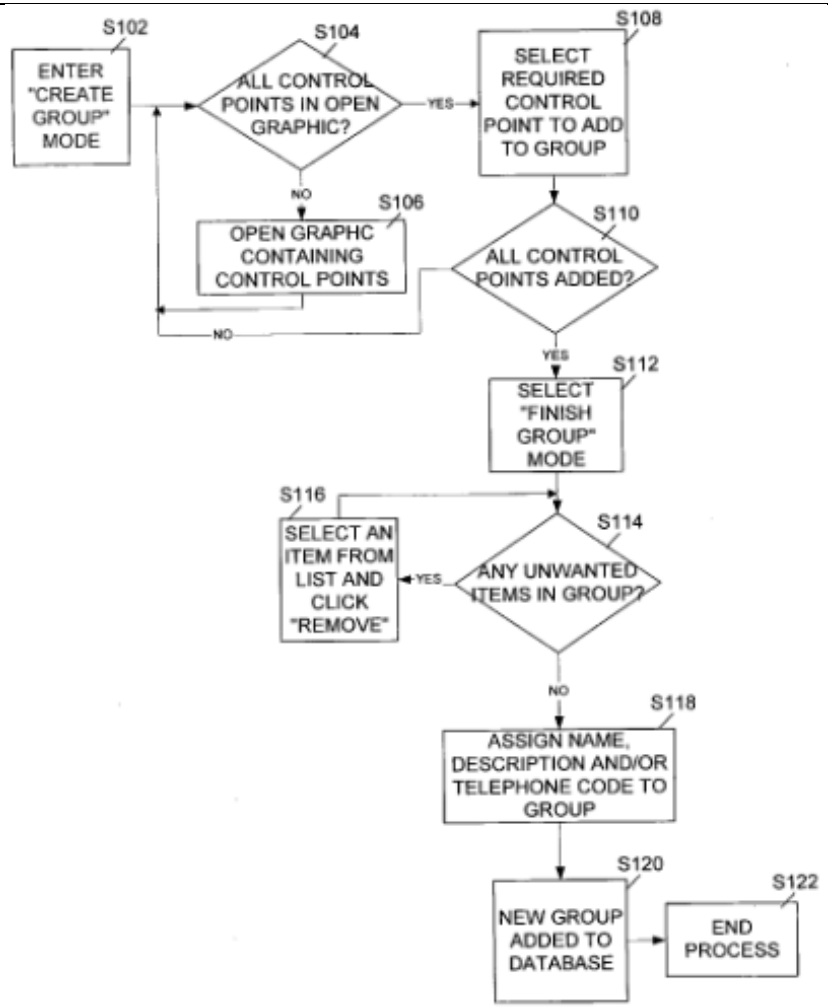


Fig. 10

Steiner '212's system further included a *task processing schedule parameter that configures a start time of at least one process of the multiple processes*. For example, as explained above, Steiner '212's system allowed users to "schedule commands to be executed for a group of electrical/electronic devices, or command a group of electrical/electronic devices to respond to a particular condition." Steiner '212 at [0011].

Steiner ’212’s devices further *included at least one of a home appliance, a smart phone or a search engine.* For example, Steiner ’212’s devices included “a mixture of lighting fixtures, window treatments, wall controls, communication devices, audio/visual devices, heating, ventilating, air-conditioning and refrigeration products.” Steiner ’212 at [0028].

Steiner ’212’s system further included *a first machine of the multiple machines forwarding a command received from the user to the relation server, the relation server controlling the selected machines according to the command, wherein the selected machines include the first machine*. For example, Steiner ’212’s system allowed a user to input a command to control the devices from any of the endpoint devices that could access a web browser or any telephone. “Using standard web browser software, a user [could] control objects that were defined in design module 302 and grouped in draw module 306,” and Steiner ’212’s system was further “operative to enable users to control groups of objects using a touch telephone.” Steiner ’212 at [0124]–[0128].

Steiner ’212’s system further contemplated *the relation profile including a group parameter that corresponds to identities of machines required for performing the command* and *including a group identity parameter corresponding to an identity of a group consisting of machines required for performing the command*. For example, in Steiner ’212’s system, “a plurality of electrical/electronic devices 108 can be programmed to perform various tasks as a group. In a preferred embodiment of the present invention, design module 302 functions to control a group of electrical/electronic devices 108 to operate, or, alternatively, to prevent operation.” Steiner ’212 at [0096]. As shown in Steiner ’212’s Figure 8C and Figure 10, excerpted above, such groups of devices could be defined by the system’s user.

Steiner ’212’s system further contemplated *the task processing schedule parameter including a sub-parameter configuring a start condition of at least one process of the multiple processes*. For example, in Steiner ’212’s system, a user could “schedule commands to be executed for a group of electrical/electronic devices, or command a group of electrical/electronic devices to respond to a particular condition.” Steiner ’212 at [0011].

Steiner ’212’s system further included *machine profiles of the multiple machines* that themselves included *machine identity parameters*. For example, Steiner ’212’s system included “and identifier and a type of the electrical/electronic device 108 [] stored in the internal array structure” of information processor 102. Steiner ’212 at [0120].

Steiner ’212’s system further included *a user identity parameter corresponding to an identity of a user being capable of using a machine* and *a group identity parameter corresponding to an identity of a user group being capable of using a machine*. For

example, Steiner ’212’s system included a “security module 312” whereby “authorized users are defined to permit individuals to access the various modules and the web enabled interface by the present invention,” and to prevent unauthorized users from, for example, “control[ing] lights or other electrical/electronic devices 108.” Steiner ’212 at [0141].

Steiner ’212’s system further included *interventions that included selecting some processes of the multiple process* and *approving the multiple processes*. For example, Steiner ’212’s system provided users with “substantially real-time control of groups of electrical/electronic devices,” Steiner ’212 at [0027], and also enabled a user to “schedule commands to be executed for a group of electrical/electronic devices, or command a group of electrical/electronic devices to respond to a particular condition.” Steiner ’212 at [0011].

Steiner ’212 was just one example of a centralized controller for controlling various devices that was well known in the industry by the mid-2000s, a decade before the ’518 Patent’s alleged priority date. For example, U.S. Patent No. 9,153,125 (“Madonna ’125”)—whose application was filed December 20, 2005—disclosed “[a]n integrated, multimedia, entertainment, communications and control system . . . based on a general purpose computer . . . capable of interfacing with, controlling or managing a wide variety of audio, video, telecommunications, data communications or other devices.” Madonna ’125 at Abstract. Madonna ’125’s system further provided users with “a programming environment for creating services or user experiences that may incorporate features or functionalities of several devices that are conventionally operated as separate, standalone devices.” Madonna ’125 at Abstract. Much like Steiner ’212’s application filed that same year, Madonna ’125 further demonstrates that the limitations of the ’518 Patent’s claims were well understood, routine, and conventional well before the ’518 Patent’s priority date.

For example, Madonna ’125’s system included *multiple machines*, including “a wide variety of audio, video, telecommunications, data communications or other devices.” Madonna ’125 at Abstract. Madonna ’125’s Figure 1 below shows an even wider variety of devices Madonna´’125’s system included:

Madonna ’125 at Figure 1

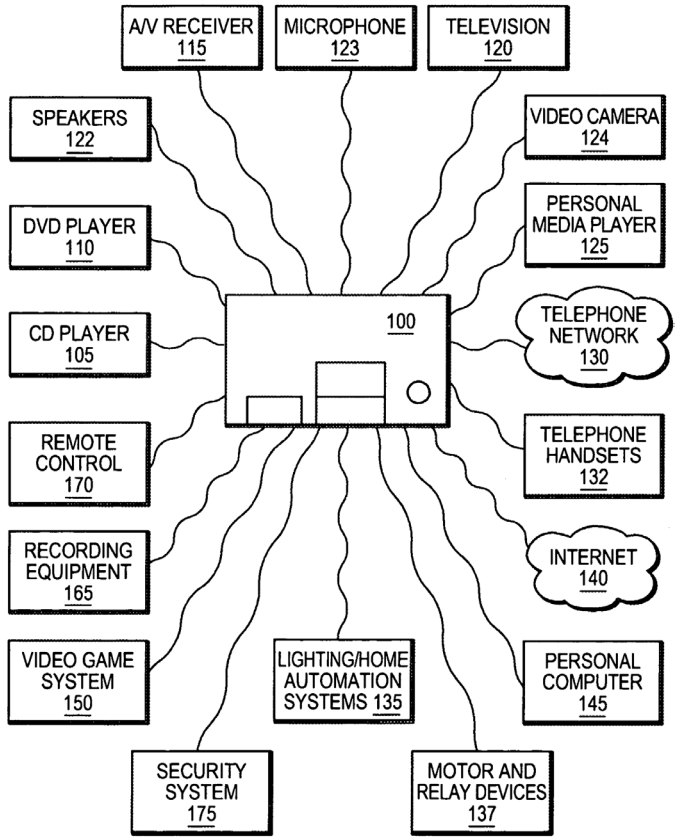


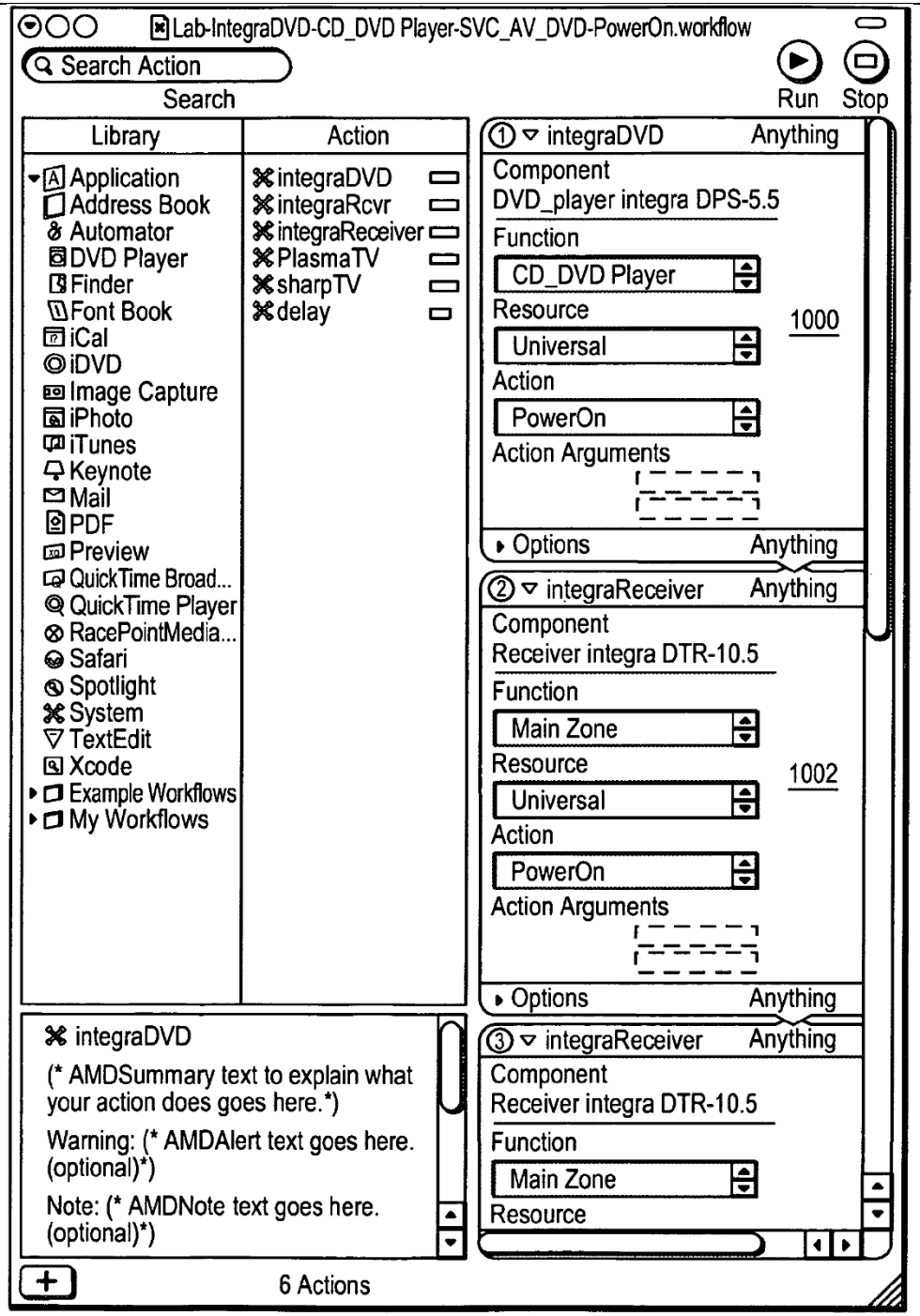
FIG. 1

Madonna ’125’s system further included *a relation server for storing a relation profile including a task processing schedule parameter which defines a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes*. For example, Madonna ’125’s system included a programmable media controller 100. Madonna ’125’s programmable multimedia controller was “capable of controlling, switching data between, and/or interoperating with a variety of electronic devices, such as audio, video, telephony, data, security, motor-driven, relay-driven, and/or other types of

electronic devices." Madonna '125 at 5:22-32. Madonna '125's programmable multimedia controller "include[ed] a programming environment for creating services or user experiences that may incorporate features or functionalities of several devices that are conventionally operated as separate, standalone devices. Such services may range in complexity from simple control functions to multimedia experiences that combine high performance audio and video with the graphics capability of a general-purpose computer, web-based services and telecommunications." Madonna '125 at 2:24–32. Madonna '125's programmable multimedia controller stored the service rules in its "[d]ata collection 402 . . . preferably in the form of XML files." Madonna '125 at 9:27-29.

Madonna '125's programmable media controller was also able to schedule devices within its system to perform commands in a sequence, and to *generate a new relation profile based on an intervention by a user in the relation profile*. For example, Madonna '125's Figure 10 shows a UI through which a user could define a service rule by choosing "discrete actions which are to be executed consecutively. For example, in panel 1000, the specified action is to turn on the power to an Integra model DPS-5.5 DVD player. In panel 1002, the specified action is to turn on the power to an Integra model DTR-10.5 receiver." Madonna '125 at 12:46–51.

Madonna '125 at Figure 10.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iTunes
Keynote
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Preview
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RacePointMedia...
Safari
Spotlight
System
TextEdit
Xcode
Example Workflows
My Workflows
integraDVD
integraRcvr
integraReceiver
PlasmaTV
sharpTV
delay
① integraDVD Anything
Component
DVD_player integra DPS-5.5
Function
CD_DVD Player
Resource
Universal
Action
PowerOn
Action Arguments
1000
Options Anything
② integraReceiver Anything
Component
Receiver integra DTR-10.5
Function
Main Zone
Resource
Universal
Action
PowerOn
Action Arguments
1002
Options Anything
③ integraReceiver Anything
Component
Receiver integra DTR-10.5
Function
Main Zone
Resource
integraDVD
(* AMDSummary text to explain what your action does goes here.*)
Warning: (* AMDAlert text goes here. (optional)*)
Note: (* AMDNote text goes here. (optional)*)
6 Actions

FIG. 10

Madonna ’125’s system further included *at least one of a home appliance, a smart phone or a search engine*. For example, Madonna ’125’s programmable multimedia controller “is capable of interfacing with, controlling or managing a wide variety of audio, video, telecommunications, data communications or other devices,” Madonna ’125 at Abstract, including, but not limited to, home appliances such as television 120, AVV receiver 115, speakers 122, lighting automation systems 135, or security system 175; smartphones via telephony network 130; or a search engine via internet 140, as shown in Madonna ’125’s Figure 1 above.

Madonna ’125’s system further included *a first machine of the multiple machines forwarding a command received from the user to the relation server, the relation server controlling the selected machines according to the command, wherein the selected machines include the first machine*. For example, in Madonna ’125’s system “A conventional DVD player . . . 1400 is supplied with a special DVD that may contain, for example, an interactive or menu-drive video which presents a series of menus, a system ‘control panel’ or similar control options to a user” through which a user could “choose[] control options [and] DVD player 1400 respond[ed] by producing an output audio stream in which control information is embedded,” and transmitted the control information to the

programmable media controller to be used for controlling devices in the system, as shown in Madonna ’125’s Figure 14 below. Madonna ’125 at 13:42–59

Madonna ’125 at Figure 14

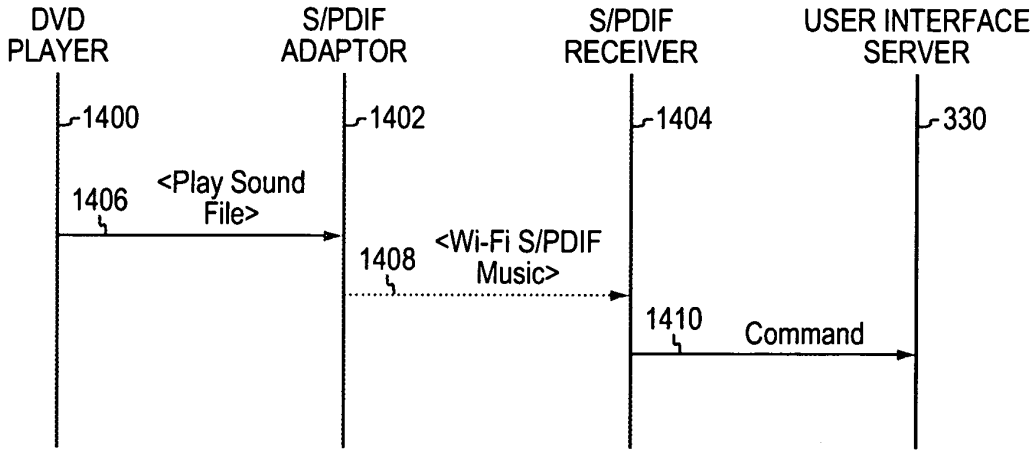


FIG. 14

Madonna ’125’s system further included *commands that included a reservation or a payment*. For example, Madonna ’125’s system supported commands for controlling “a personal assistant or concierge service” for servicing, *inter alia*, requests for “on-line ticket purchases [and] on-line reservations.” Madonna ’125 at 17:8–17

Madonna ’125’s service rules further included *a capability set parameter corresponding to information about capabilities required for performing the command*. For example, Madonna ’125’s service rules “define[d] what components are needed to implement a particular service and how a particular component or group of components will interact to provide the service.” Madonna ’125 at 3:34–38.

Madonna ’125’s service rules further included *a group parameter corresponding to the identities of machines required for performing a command*. For example, Madonna ’125’s service rules “define[d] what components are needed to implement a particular service and how a particular component or group of components will interact to provide the service.” Madonna ’125 at 3:34–38.

Madonna ’125’s service rules further included *a group identity parameter corresponding to the an identity of a group consisting of machines required for performing a command*. For example, Madonna ’125’s service rules “define[d] what components are needed to implement a particular service and how a particular component or group of components will interact to provide the service.” Madonna ’125 at 3:34–38.

Madonna ’125’s service rules further included *a task description parameter corresponding to information related to the command and saved in a form of text*. For example, as shown in Madonna ’125’s Figure 10 below, when a user defined a service rule they were prompted to input “Summary text to explain what your action does.”

Madonna ’125 at Figure 10.

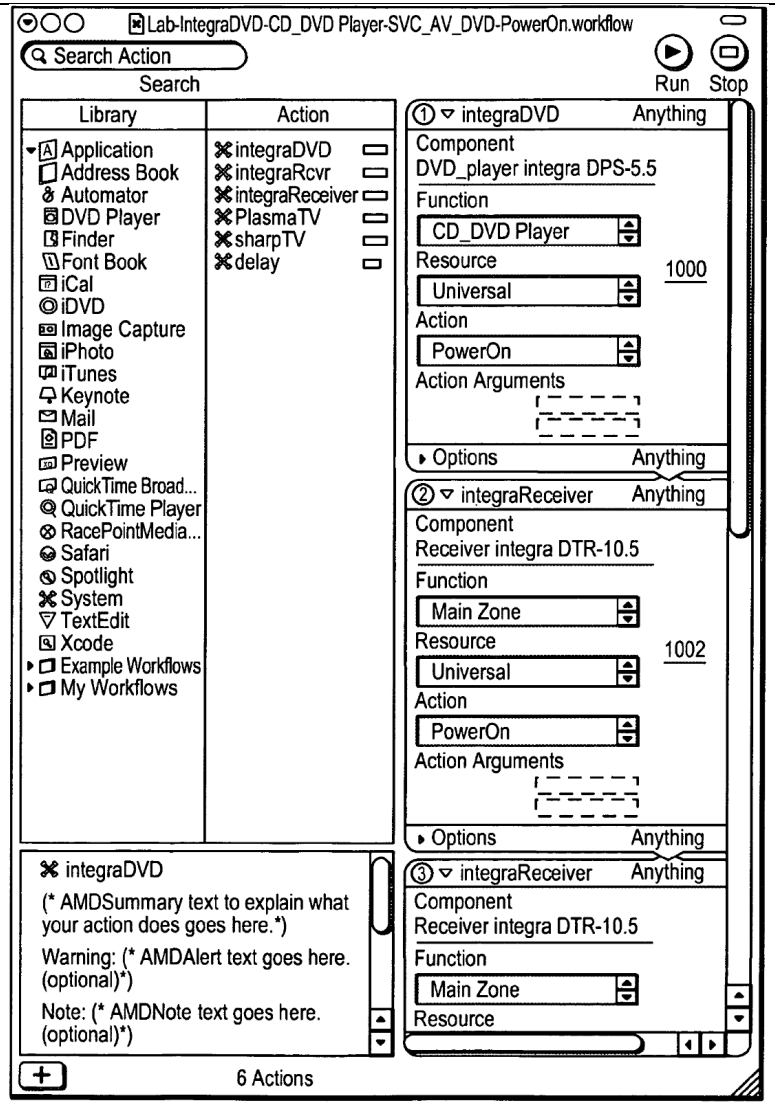

Lab-IntegraDVD-CD_DVD Player-SVC_AV_DVD-PowerOn.workflow
Search Action
Search
Run
Stop
Library
Action
Application
Address Book
Automator
DVD Player
Finder
Font Book
iCal
iDVD
Image Capture
iPhoto
iTunes
Keynote
Mail
PDF
Preview
QuickTime Broad...
QuickTime Player
RacePointMedia...
Safari
Spotlight
System
TextEdit
Xcode
Example Workflows
My Workflows
integraDVD
integraRcvr
integraReceiver
PlasmaTV
sharpTV
delay
integraDVD
(* AMDSummary text to explain what your action does goes here.*)
Warning: (* AMDAlert text goes here. (optional)*)
Note: (* AMDNote text goes here. (optional)*)
1 integraDVD Anything
Component
DVD_player integra DPS-5.5
Function
CD_DVD Player
Resource
Universal
Action
PowerOn
Action Arguments
1000
Options Anything
2 integraReceiver Anything
Component
Receiver integra DTR-10.5
Function
Main Zone
Resource
Universal
Action
PowerOn
Action Arguments
1002
Options Anything
3 integraReceiver Anything
Component
Receiver integra DTR-10.5
Function
Main Zone
Resource
6 Actions

FIG. 10

Madonna ’125’s service rules further included a *task processing schedule parameter including a sub-parameter configuring a start condition of at least one process of the multiple processes*. For example, “a simple service may be defined such that when a user is watching a DVD movie and receives a phone call, the system of the present invention will automatically command the DVD player to pause and cause the caller ID to be displayed in the video frame on the television.” Madonna ’125 at 4:21–26. In such a service rule, the start condition may be defined as a user is watching a DVD movie or a user receiving a phone call.

Madonna ’125’s system further included *multiple machine profiles of the multiple machines*. For example, Madonna ’125’s system included “a library of component profiles. Component profiles may be implemented in a number of ways based upon desired attributes of the underlying data structures. In a preferred embodiment, a component profile is implemented as an Extensible Markup Language (XML) file which describes certain attributes of a component such as a DVD player, television, amplifier or any other type of component that is capable of interfacing with the system of the present invention.” Madonna ’125 at 2:42–58.

Madonna ’125’s component profiles further included *a status parameter including at least one sub-parameter of a current operation status sub-parameter, a current availability sub-parameter, a current process sub-parameter a scheduled termination time of current process sub-parameter, a current execution function sub-parameter, or a scheduled termination time of currently executed function sub-parameter*. For example, Madonna ’125’s Figures 5A-5M outline an example of a component profile for a DVD player, and “[s]ection 506 specifies several possible status conditions that the DVD player may report: standby, playback, pause, stop and unknown.” Madonna ’125 at 11:10–12.

Madonna ’125 at Figure 5B

```
  </media_interfaces>
- <state_variable_list>
    <state_variable name="Power_current_power_setting" min_value="0"
      max_value="1">0</state_variable>
  </state_variable_list>
- <status_notification_list>
  - <status_notification name="DEVICE_STATUS">
      <status update_type="constant" data="SST00"
        data_type="character">STANDBY</status>
      <status update_type="constant" data="SST01" data_type="character"
        svc_event_name="dvdStartedPlaying">PLAYBACK</status>
      <status update_type="constant"
        data="SST02" data_type="character">PAUSE</status>
      <status update_type="constant"
        data="SST03" data_type="character">STOP</status>
      <status update_type="constant"
        data="SSTFF" data_type="character">UNKNOWN</status>
    </status_notification>
  - <status_notification name="CURRENT_DISC_TYPE">
      <status update_type="constant" data="DST00" data_type="character">NO
        DISC</status>
      <status update_type="constant" data="DST01" data_type="character"
        svc_event_name="dvdInsert">DVD</status>
      <status update_type="constant" data="DST03" data_type="character"
        svc_event_name="vcdInsert">VCD</status>
      <status update_type="constant" data="DST04" data_type="character"
        svc_event_name="cdInsert">CD</status>
      <status update_type="constant" data="DST07"
        data_type="character">DATA</status>
      <status update_type="constant" data="DSTFF"
        data_type="character">UNKNOWN</status>
    </status_notification>
  - <status_notification name="DIMMER_LEVEL">
      <status update_type="constant" data="MST00"
        data_type="character">BRIGHT</status>
      <status update_type="constant" data="MST01"
        data_type="character">MEDIUM</status>
      <status update_type="constant" data="MST02"
        data_type="character">DIM</status>
      <status update_type="constant" data="MST03"
        data_type="character">UNKNOWN</status>
  - </status_notification>
    <status_notification name="PROGRESSIVE_VIDEO">
      <status update_type="constant" data="PST00"
        data_type="character">OFF</status>
      <status update_type="constant" data="PST01"
        data_type="character">ON</status>
      <status update_type="constant" data="PSTFF"
        data_type="character">UNKNOWN</status>
    </status_notification>
  </status_notification_list>
- <logical_component logical_component_name="CD_DVD Player">
  - <implementation>
```

506

508

FIG. 5B

Madonna ’125’s component profiles further included *a capability parameter including at least one sub-parameter of a title of process sub-parameter, an input parameter sub-parameter, an output parameter sub-parameter, a process processing time sub-parameter, a process processing condition sub-parameter, or a function sub-parameter.* For example, in Madonna ’125’s Figure 5A, “[t]he section denoted by reference number 500 specifies that the DVD player has an RS232 serial communications port which may be used to control the player. Section 502 specifies that the DVD player has digital audio outputs available at a coaxial connector as well as an optical connector. Section 504 specifies that the DVD player has component video output available at both a BNC connector as well as a coaxial connector, and that composite and S-video (left and right) outputs are available.” Madonna ’125 at 11:1–9.

Madonna ’125 at Figure 5A

```
<?xml version="1.0" encoding="UTF-8" ?>
<!-- <!DOCTYPE component SYSTEM "./racepoint_component_profile.dtd"> -->
- <component xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation="racepoint_component_profile.xsd"
  manufacturer="Integra" model="DPS-5.5" device_class="DVD_player"
  minimum_component_engine_version="0">
  - <control_interfaces preferred="rs232">
    - <rs232 data_length="8" parity_bit="no" stop_bit="1" flow_control="none"
        name_on_component="RS232" preferred_baud_rate="9600"
        response_time_length_ms="1000">
        <baud_rate speed="9600" />
        <send_prefix type="character">!2</send_prefix>
        <send_postfix type="hex">0d</send_postfix>
        <receive_start_condition type="character">!2</receive_start_condition>
        <receive_end_condition type="hex"
         test_condition="data">1A</receive_end_condition>
        <!-- EOF -->
    - <response_codes>
        <!-- For turning off status indications only for now -->
        <rspcode status="success">SPM00</rspcode>
        <!-- All other response codes assumed failure -->
      </response_codes>
    </rs232>
  </control_interfaces>
- <media_interfaces>
  - <output name_on_component="AUDIO OUTPUT DIGITAL">
      <audio_media type="coaxial_digital" />
      <audio_media type="optical_digital" />
      <resource resource_type="AV_DVD_SOURCE" />
      <resource resource_type="AV_CD_SOURCE" />
    </output>
  - <output name_on_component="AUDIO OUTPUT ANALOG">
      <audio_media type="rca_stereo" />
      <audio_media type="rca_stereo" />
      <resource resource_type="AV_DVD_SOURCE" />
      <resource resource_type="AV_CD_SOURCE" />
    </output>
  - <output name_on_component="VIDEO OUTPUT COMPONENT">
      <video_media type="component_bnc" />
      <video_media type="component_coaxial" />
      <resource resource_type="AV_DVD_SOURCE" />
    </output>
  - <output name_on_component="VIDEO OUTPUT VIDEO (LEFT)">
      <video_media type="composite" />
      <video_media type="s_video" />
      <resource resource_type="AV_DVD_SOURCE" />
    </output>
  - <output name_on_component="VIDEO OUTPUT VIDEO (RIGHT)">
      <video_media type="composite" />
      <video_media type="s_video" />
      <resource resource_type="AV_DVD_SOURCE" />
    </output>
```

500

502

504

FIG. 5A

Madonna ’125’s component profiles further included *a machine identity parameter*. For example, Madonna ’125’s component profiles defined a manufacturer, model, and device class of the associated component, as shown in Madonna ’125’s Figure 5A above.

Madonna ’125’s system further included *user identity parameters and group identity parameters corresponding to an identity of a user being capable of using a machine and a user group being capable of using a machine,* respectively. For example, Madonna ’125’s system included “[u]ser profiles [that] may also include service restrictions. For example, a user profile for a child may contain information which blocks access to adult videos or cable channels.” Madonna ’125 at 9:55–64.

Madonna ’125’s component profiles further included *an operating system parameter corresponding to a type of an operating system used by a machine*. For example, as shown in the example component profile in Madonna ’125’s Figure 5A above, the component profile defined a minimum component engine version usable by the component.

Madonna ’125’s component profiles further included *an interface parameter corresponding to an interface protocol between the relation server and a machine*. For example, in the example component profile set out in Madonna ’125’s Figures 5A-5M “[t]he section denoted by reference number 500 specifies that the DVD player has an RS232 serial communications port which may be used to control the player,” indicating the DVD player may be controlled by the programmable multimedia controller via the RS232 protocol. Madonna ’125 at 11:24–29.

Madonna ’125’s system further included *information related to grouping the multiple machines saved by the relation server*. For example, Madonna ’125’s programmable multimedia controller saved information related to grouping the machines into zones, were an example of a zone might be “a zone named ‘Lab’ that uses an Integra model DTR-10.5 receiver as the zone master The zone also contains an NEC px-42xr3a plasma screen monitor, a Motorola 62000 cable receiver, an Integra DPS-5.5 DVD/CD player and Bay Audio surround sound speakers, all as specified by section 606.” Madonna ’125 at 11:30–51

Madonna ’125’s programmable multimedia controller further *generated a capability set required to execute a user command, and generates the task processing schedule parameter according to the capability set, a status parameter of at least one machine of the multiple machines, and a capability parameter of the at least one machine*. For example, Madonna ’125’s example service rule described in Figures 8A-8H “specifie[d] the resources that are needed to implement this service: a radio source; an audio switch function (to switch the input audio signal to the output device (speakers)); a surround sound processor function and surround sound speakers; or a radio source; an audio switch function; a volume control function; an amplifier function; and stereo speakers.” Madonna ’125 at 12:8–16

By the early 2010s—and still before the ’518 Patent’s alleged priority date—centralized controllers for home/building automation, and robust, fully featured programmable systems were not only well known in the industry but were also widely available for sale to

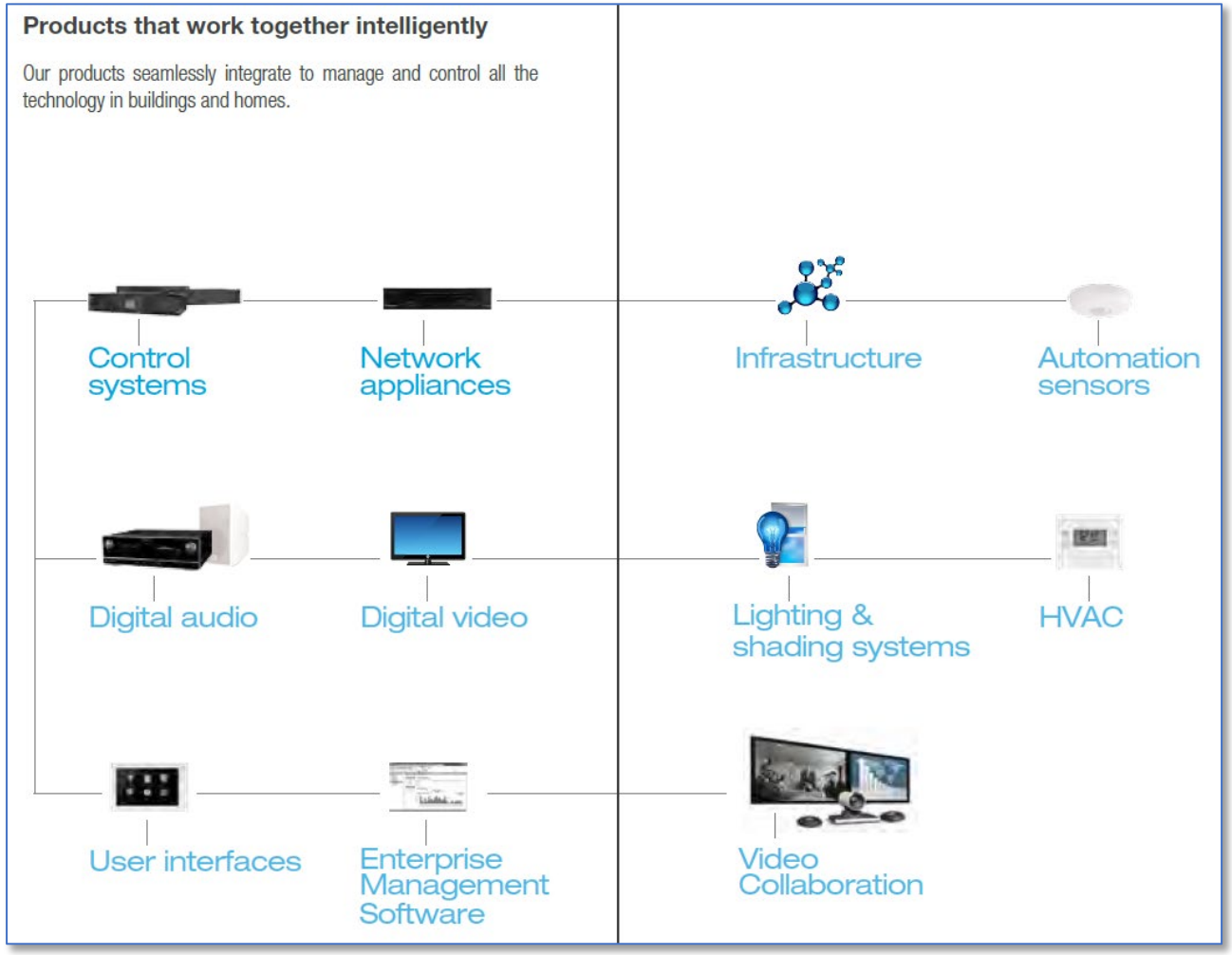
businesses and consumers alike. For example, the following is a non-exhaustive list of that programmable systems including centralized controllers for home/building automation that were available for sale in or before 2015:

- The Crestron System
- The EcoBee Energy Management System
- The Honeywell Lyric Home Security System
- The Savant Ecosystem
- Google Nest
- WeMo by Belkin
- Simplify My Home's Whole Home Automation System

The availability of these systems before November 3, 2015 demonstrates that the limitations of the '518 Patent's claims were well understood, routine, and conventional before the '518 Patent's priority date.

As just one example, the Crestron System included *multiple machines*. For example, as shown below in an excerpt from a Crestron brochure from 2014, the Crestron System was capable of controlling devices including network appliances, automation sensors, digital audio, digital video, lighting and shading systems, and HVAC.

Crestron Brochure at 5



The Crestron System further included *a relation server for storing a relation server for storing a relation profile including a task processing schedule parameter which defines a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes.* For example, the Crestron System included control systems, as shown

above, that controlled the various devices within the system. Further, the Creston System's control system was able to schedule processes to occur by, for example, scheduling lights to turn on, turn off, or dim, or scheduling shades to open or close.

Crestron Brochure at 65

Crestron Fusion®

Fusion EM®

Fusion EM Energy Management Software delivers the first enterprise building management solution that **unifies all environmental systems on a single platform.** From a centralized Web interface, organizations can **automate lighting, shades, and climate control** for an entire building or campus based on room occupancy, meeting schedules, time clock events and daylight levels. Demand response rules can also be set to reduce energy consumption at critical moments.

The Crestron System further *generated a new relation profile based on an intervention by a user*. For example, a user of the Crestron System could program control of the various devices in the system via a control touch screen, a television, a smartphone, a tablet, or a computer.

Crestron Brochure at 59

3-Series® Control Systems

On-Screen Display Control

The MC3 offers a 3-Series Control System® in a compact form factor with several special features including onboard audio file playback and **integrated infiNET EX® wireless gateway.**

OSD (On-Screen Display) enables control through any TV or video display using customizable scrolling menus, full-color icons, bar graphs, and metadata.

MC3 3-Series Control System®

- 3-Series® control engine
- Onboard 256MB RAM & 2GB Flash memory
- Expandable storage up to 1TB
- Integrated infiNET EX® wireless gateway
- Industry-standard Ethernet and Cresnet® wired communications
- Available RF and IR control options
- Customizable OSD user interface
- Component and composite video outputs
- WAV, MP3, and WMA audio file playback
- Built-in IR, COM, relay, and digital input ports
- High-speed USB 2.0 host ports
- On-screen installation setup
- Installer setup via Crestron Toolbox™ or Internet Explorer®

Crestron Brochure at 113

Control Apps

Crestron Control® for Smart Devices

Take full control of your home, boardroom, or classroom using the one device that goes with you everywhere. The Crestron® app **turns your iPhone®, iPod touch®, iPad®, or Android™ device into the ultimate mobile Crestron touch screen,** enabling control of home theater and whole-house AV, boardroom and classroom multimedia, lighting, shades, climate control, security, and other systems from virtually anywhere.

NEW! Crestron® App
Control App for Apple® iOS® and Android™

- Compatible with iPhone®, iPad®, and iPod touch®
- **NEW!** Compatible with Android™ smartphones and tablets
- Extensively customizable user interface
- Control of lights, media, climate, security and more
- Real-time status feedback and metadata
- Smart Graphics™ support
- Rava™ SIP Intercom support
- Live streaming video from security cameras
- Seamless integration with third-party apps
- SSL secured communication
- Requires no special server or 3rd-party service
- Programmed just like a Crestron touch screen
- Free demo download
- In-app purchase enables full version

iPanel™ Docks for iPad Air™

The iPad Air™ offers a very popular choice for controlling any Crestron system. Our stylish iPanel™ docks **transform the iPad Air into a stationary Crestron touch screen** for any application requiring a tabletop or wall mount docking solution.

NEW! IDOC-PAD-LCA-DS
iPanel™ Table Dock for iPad Air™

- Enables stationary tabletop touch screen control
- Affords seamless control system integration using the Crestron® App
- Charges the iPad Air while docked
- Retains use of the device's microphone, speaker, camera, and buttons
- Allows for easy docking and undocking
- Available in smooth white or black finishes

Crestron Brochure at 117

Control Apps

XPanel featuring Smart Graphics™

Crestron was the first in the industry to offer an IP-based remote control solution, unleashing the vast possibilities for controlling, monitoring, and managing integrated systems over a LAN, WAN, and the Internet. Today's XPanel technology with Smart Graphics™ affords an incredibly robust IP control platform to deliver **advanced virtual touch screen control through any popular Web browser,** or as a desktop application, whether running on a Mac® or Windows® PC.

XPanel Crestron Control® for Computers

- Virtual Crestron touch screen control on a computer
- Compatible with Windows®, Mac®, and other platforms
- Runs as a desktop application or in a Web browser
- Supports Smart Graphics™
- Programmed just like a Crestron touch screen or mobile app
- Can be generated instantly from an existing touch screen or mobile project
- Communicates directly over IP with a Crestron control system
- No special servers or service fees required

The Crestron System further included *a task processing schedule parameter that configured a start time of at least one process.* For example, Creston System's control system was able to schedule processes to occur by, for example, scheduling lights to turn on, turn off, or dim, or scheduling shades to open or close.

Crestron Brochure at 65

Crestron Fusion®

Fusion EM®

Fusion EM Energy Management Software delivers the first enterprise building management solution that **unifies all environmental systems on a single platform.** From a centralized Web interface, organizations can **automate lighting, shades, and climate control** for an entire building or campus based on room occupancy, meeting schedules, time clock events and daylight levels. Demand response rules can also be set to reduce energy consumption at critical moments.

The Crestron System further included *a home appliance, a smart phone, or a search engine.* For example, as shown in the figure above, the Creston System was capable of controlling various home appliances, including audio devices, video devices, lighting systems, shading systems, and HVAC systems.

Patent prior art from the early-2010s further demonstrate that the limitations of the ’518 Patent’s claims were well understood, routine, and conventional before the ’518 Patent’s priority date.

For example, U.S. Patent App. Pub. 2012/0158203 (“Feldstein ’203”) was published in 2012 and disclosed “a system for managing energy use of a user,” including “a preferred energy profile associated with the user and a minimum energy profile, an automation control system that controls at least one device associated with a user, a presence detecting apparatus for detecting when the user is present, and a system control computer.” Feldstein ’203 at Abstract. Feldstein ’203’s system control computer “instruct[ed] the automation control system to operate the one device according the preferred energy profile associated with the user.” Feldstein ’203 at Abstract.

Feldstein ’203 at Fig. 1

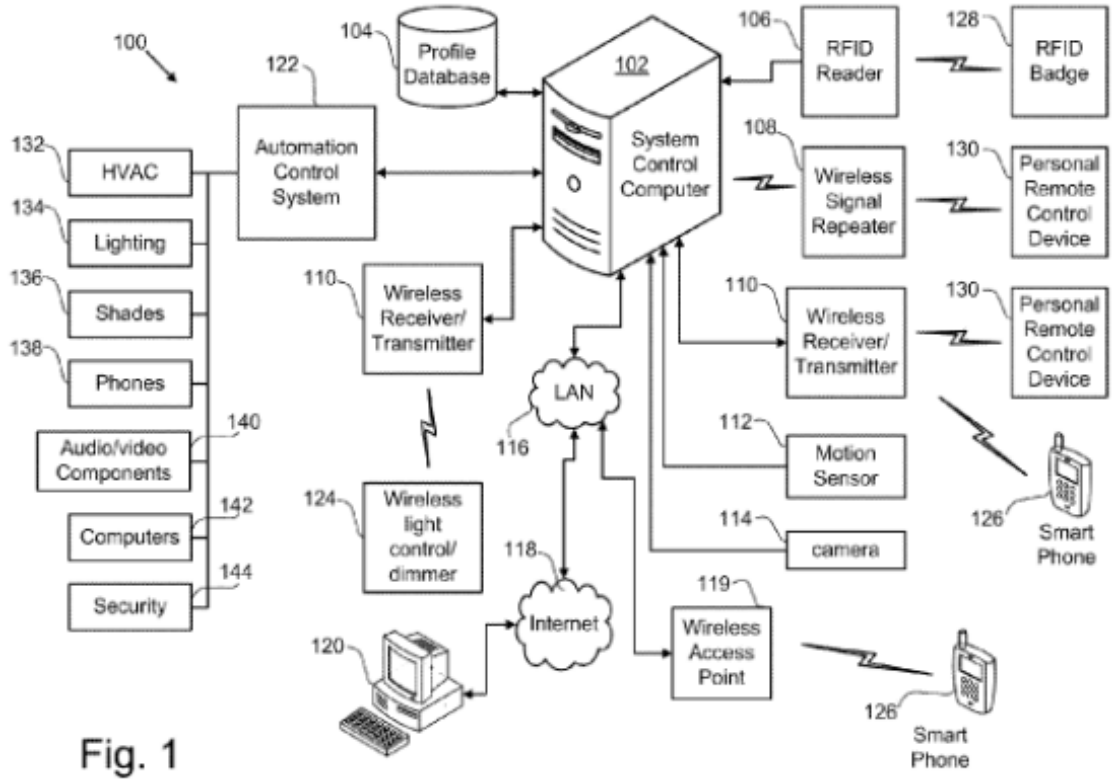


Fig. 1

Feldstein ’203’s system was further capable of scheduling when its system control computer would cause devices within the system to perform processes. For example, the system control computer could be programmed to execute energy management profiles associated with employee A and employee B when each employee is detected. When the employees were detected, “[t]he system control computer 102 retrieves the profiles for employee A and employee B from the profile database 104. The system control computer 102 then instructs the automation control system 122 to adjust the lighting, shade position, and temperature in office 204c according employee A's profile and instructs the automation control system 122 to adjust the lighting, shade position, and temperature in office 208h according employee B's profile. The system control computer 102 also instructs the automation control system 122 to turn on any respective devices assigned to employee A and employee B, such as a computer, a phone, and any other peripheral devices (e.g., a printer).” Feldstein ’203 at [0106].

By way of another example, U.S. Patent No. 10,042,336 ("Cipollo '336"), whose application was filed in September 2014, disclosed a home automation system in which "a user-defined scene is automatically captured based on current states in a home automation system." Cipollo '336 at Abstract. In Cipollo '336's system, "[t]he user-defined scene is stored, and when it is determined it should be activated, service requests are sent." Cipollo '336 at Abstract. Cipollo '336's system included a Host Controller 140 which, as shown in Cipollo '336's Figure 1 below, contained a database to store user-defined scenes, and was connected to device controllers such that it could control multiple devices within the home automation system based on a user defined scene.

Cipollo '336 at Figure 1

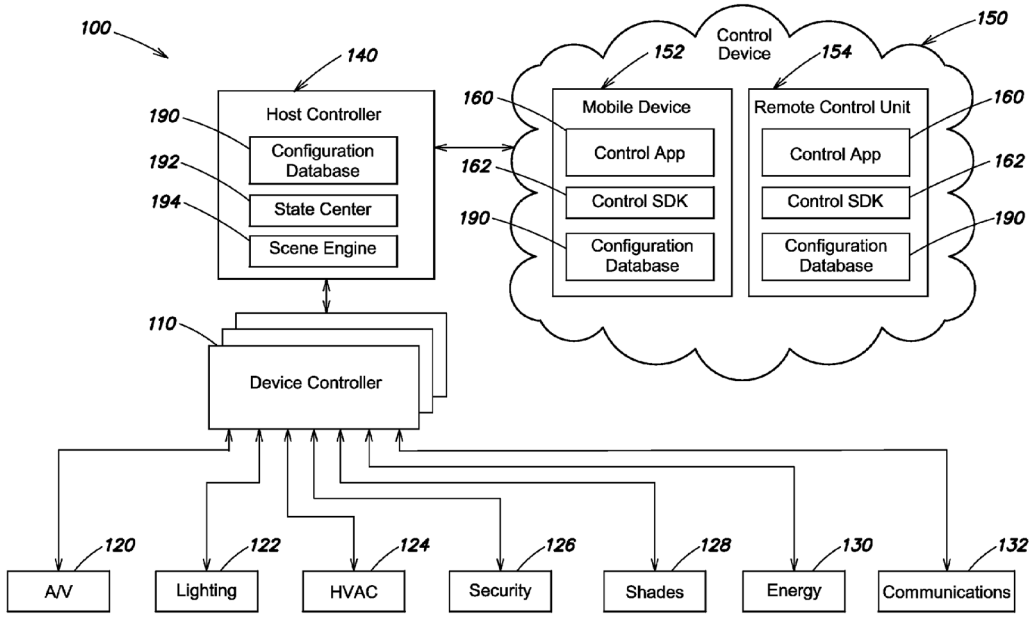


FIG. 1

Cipollo '336's system was further capable of scheduling when its system would activate a user-defined scene and thereby cause the relevant devices within the system to execute processes. Particularly, Cipollo '336's system included a user interface, shown in Cipollo '336's Figure 4G-4H below, and "in response to user input in UI elements 424-430, the user-defined scene may be scheduled to activate. For example, in response to user input in a UI element 426, the scene may be scheduled to activate when a

particular time of day has been reached. Likewise, in response to user input in a UI element 428, the user-defined scene may be scheduled to activate when a celestial reference (e.g., dawn, sunset, etc.) has been reached. Similarly, in response to user input in UI elements 428-432, the user-defined scene may be scheduled to activate when a countdown timer has expired." Cipollo '336 at 7:19–31.

Cipollo '336 at Figure 4F

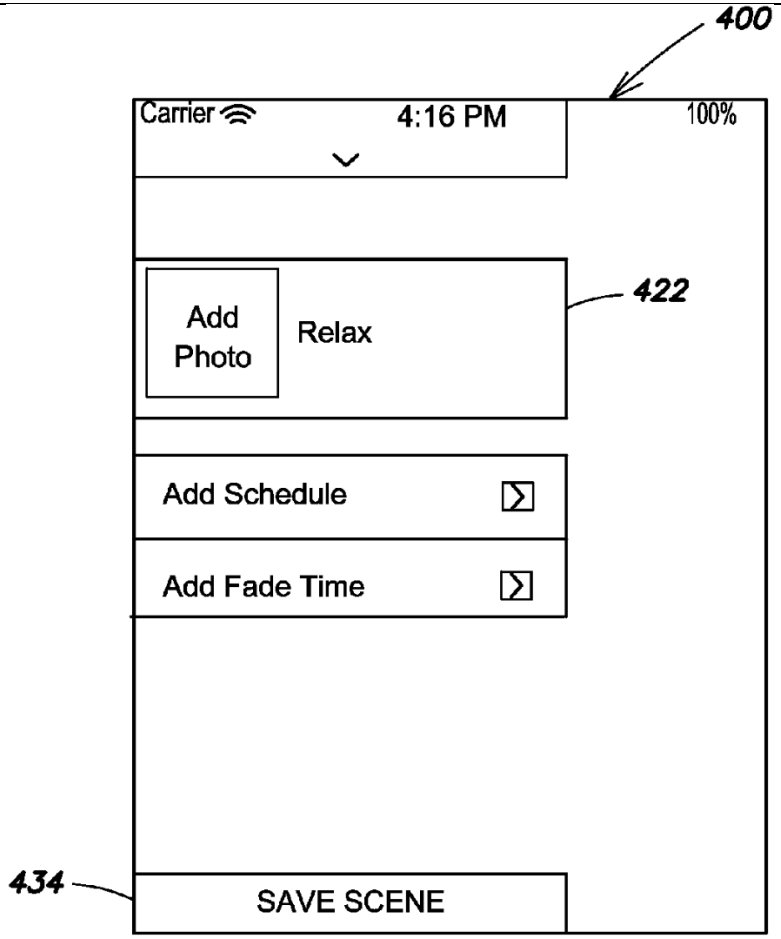

400
Carrier
4:16 PM
100%
422
Add Photo
Relax
Add Schedule
Add Fade Time
434
SAVE SCENE

FIG. 4F

Cipollo ’336 at Figure 4G

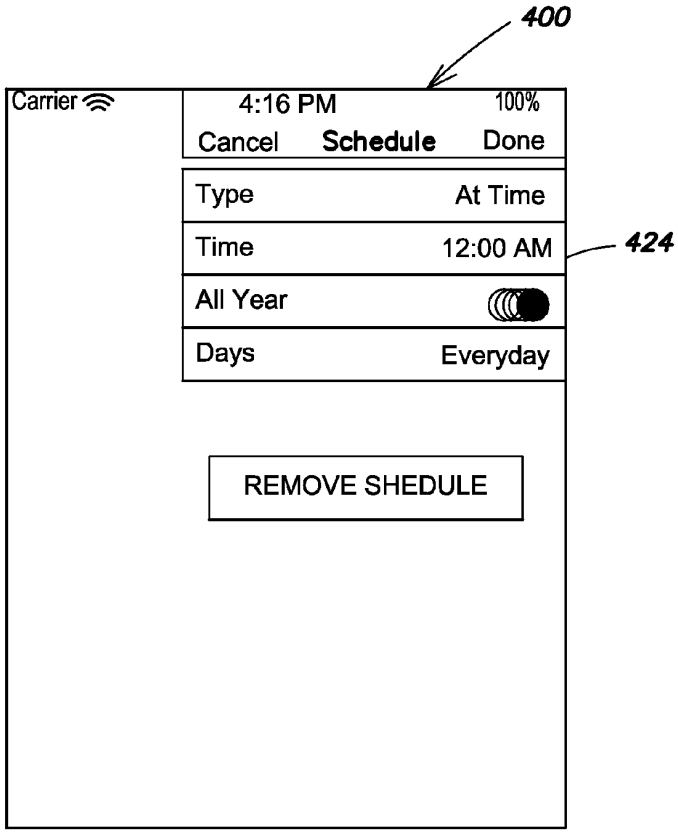


FIG. 4G

Cipollo ’336 at Figure 4H

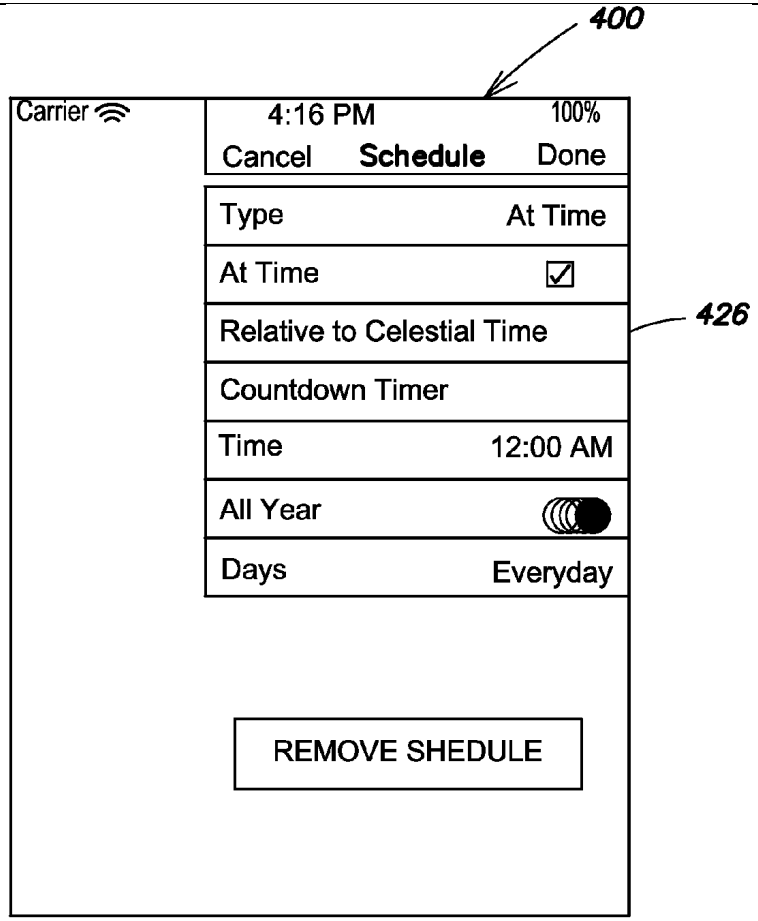


FIG. 4H

Cipollo ’336 at Figure 4I

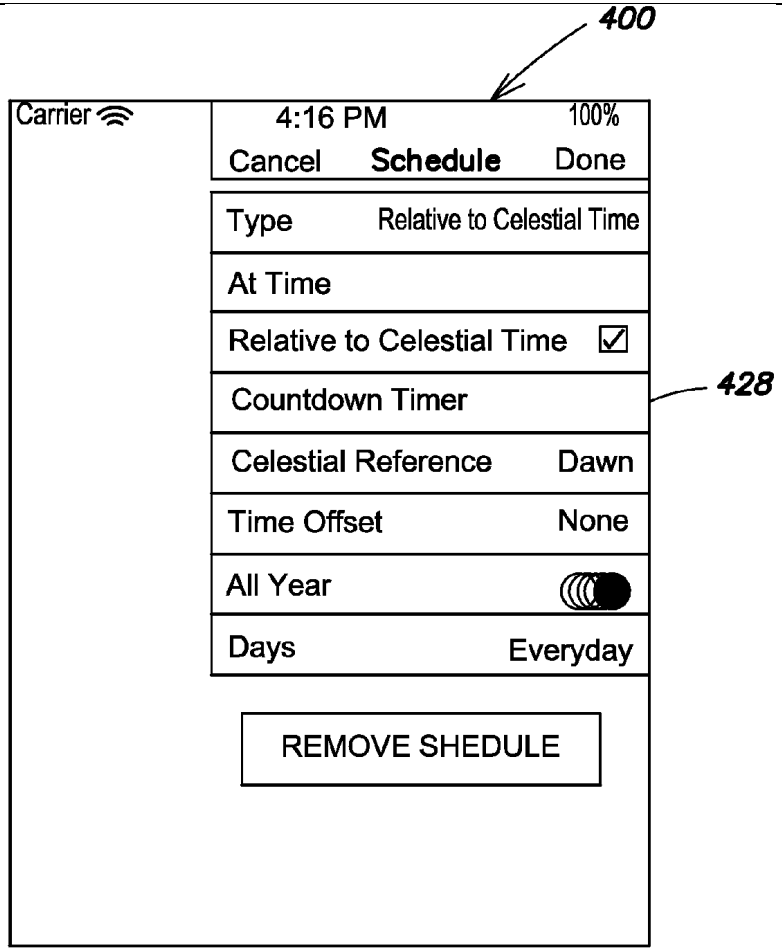


FIG. 4I

Cipollo ’336 at Figure 4J

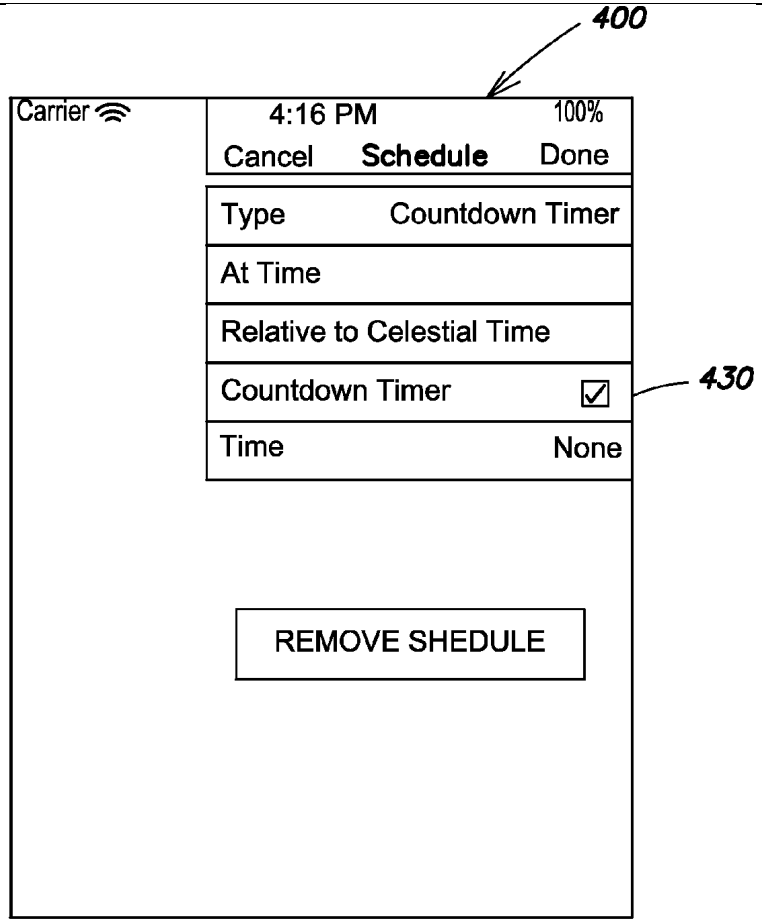


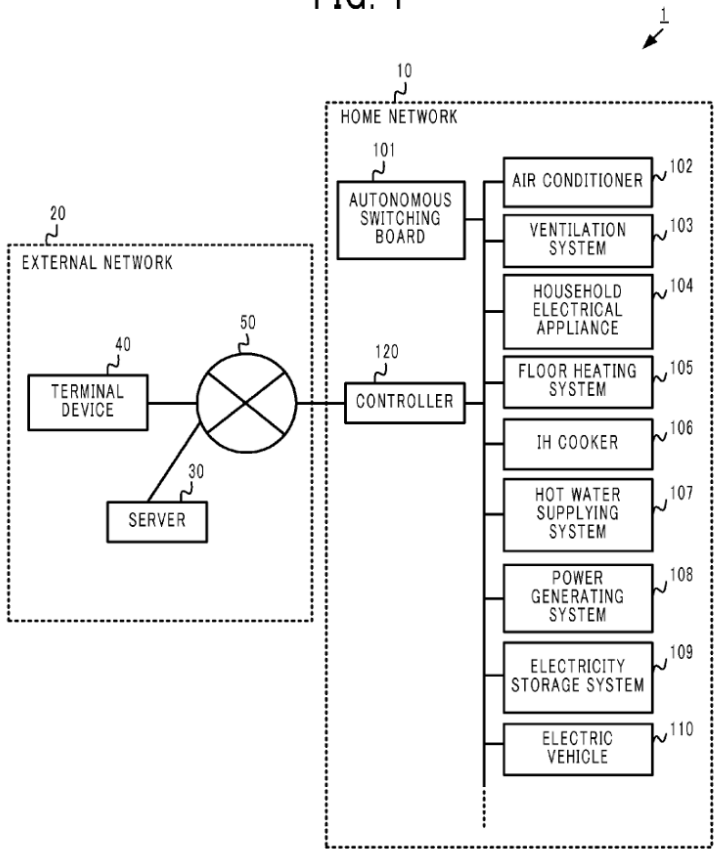
FIG. 4J

By way of another example, U.S. Patent App. Pub. 2016/0085222 ("Yabe '222") was filed in March 2014 and disclosed "a controller [that] store[d] an apparatus-room association table in which an apparatus installed in a home is associated with a room in the home, and stores a room-user association table in which the room in the home is associated with the user. The controller determines whether the user is inside the home . . . and controls the [associated] apparatus to execute a predetermined process based

on the apparatus-room association table and the room-user association table." Yabe '222 at Abstract. As shown in Yabe '222's Figure 1 below, its system consisted of a centralized controller capable of controlling various devices across a home automation system.

Yabe '222 at Figure 1

FIG. 1



Yabe ’222’s system also included extensive capabilities for scheduling when its centralized server would trigger devices to perform processes. For example, Yabe ’222’s system included “a schedule table 1000” that “store[d] a starting time control pattern that specifies the control to be executed by the controller 120 when the current date and time reaches the starting date and time of the schedule, and an ending time control pattern that specifies the control to be executed by the controller 120 when the current date and time reaches the ending date and time of the schedule.” Yabe ’222 at [0113].

Yabe ’222 at Figure 10

FIG. 10

1000

SCHEDULE	USER	DETAIL OF SCHEDULE	STARTING DATE AND TIME OF SCHEDULE	STARTING CONTROL PATTERN	ENDING DATE AND TIME OF SCHEDULE	ENDING CONTROL PATTERN
SCHEDULE X	FATHER	WORK	APRIL 23, 2013, 07:30	A	APRIL 23, 2013, 19:30	B
SCHEDULE Y	MOTHER	SHOPPING	APRIL 23, 2013, 10:00	A	APRIL 23, 2013, 12:00	B
SCHEDULE Z	CHILD	SCHOOL	APRIL 23, 2013, 08:00	A	APRIL 23, 2013, 17:00	NULL
...	...	...	...	...	...	...

Yabe ’222’s “starting time control pattern” and “ending time control pattern” defined various processes that would occur upon the occurrence of the schedules defined in the scheduling table. For example, the “starting time control pattern and the ending time control pattern specify any control pattern that is set in the apparatus-room association table 900.” Yabe ’222 at [0113]. The control patterns defined in apparatus-room association table 900 define a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes by, for example, defining control patterns

whereby lighting device may be turned on or off, HVAC units may be turned on or off, televisions may be turned on or off, or the power status of a personal computer may be changed:

Yabe ’222 at Figure 9

FIG. 9

900

IDENTIFICATION NUMBER OF ROOM	IDENTIFICATION NUMBER OF APPARATUS	NAME OF APPARATUS	CONTROL PATTERN A	CONTROL PATTERN B	...
101	0001	LIGHTING DEVICE	LIGHT OFF	LIGHT ON	...
	0002	INDOOR UNIT	TURN OFF	HEATING, 20℃	...
	0003	TV	TURN OFF	TURN ON	...
	0004	FLOOR HEATER	TURN OFF	LOW	...
...	...	...	...	...	...
201	0005	LIGHTING DEVICE	LIGHT OFF	LIGHT ON	...
	0006	INDOOR UNIT	TURN OFF	DEHUMIDITY	...
	0007	TV	TURN OFF	TRUN ON	...
202	0008	LIGHTING DEVICE	LIGHT OFF	LIGHT ON	...
203	0009	LIGHTING DEVICE	LIGHT OFF	LIGHT ON	...
	0010	PC	SLEEP	NORMAL	...
...	...	...	...	...	...

These references, and others from the home/building automation industry demonstrate that the subject matter of the Challenged Claims of the ’518 Patent was well-understood, routine, and conventional in the home/building automation industry at the relevant time.

Defendant’s 102/103 invalidity contentions and claim charts, which are incorporated herein by reference, provide further description of these and other prior-art references, providing an even more complete description of the history and state of the industry as of KAIFI’s claimed priority date of the ’518 Patent. Accordingly, on or around October 1, 2010, it was well-understood, routine, and conventional in the manufacturing/assembly industry to use light to guide people in the processes ubiquitous to the manufacturing and assembly industry. It was further well-understood, routine and conventional in the manufacturing/assembly industry to remotely display recorded images of the process, send and receive signals, and use a second computer to send signals.

Patent Claim	**Exception to Eligibility, and Basis Therefor**
1[pre]. A system, comprising:	As described above, Claim 1 is directed to the abstract idea of assigning tasks needed to complete a request based (a) a known set of resources available to perform the tasks and (b) on the skills required to complete the task. Claim 1 is directed to “multiple machines; and a relation server for storing a relation profile including a task processing schedule parameter which defines a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes, herein the relation server generates a new relation profile based on an intervention by a user in the relation profile, wherein the task processing schedule parameter configures a start time of at least one process of the multiple processes, and wherein the multiple machines includes at least one of a home appliance, a smart phone or a search engine.” This claim does not contain an inventive concept such that it does more than claim the ineligible idea itself. Instead, the claim applies the abstract idea to generic computer equipment, particularly a “server” and “multiple machines.” The relation server does nothing more than receiving signals causing it to store profiles for controlling multiple machines to

	perform multiple processes and, at the appointed time or under the appointed condition, sending signals that control the multiple machines to perform the processes defined in the profile. In this claim, the server and the multiple machines are performing routine and generic processing capabilities of computers generally. *See Affinity Labs*, 838 F.3d at 1262 (characterizing "transmitting and receiving signals" as "routine functions."). Similarly, server is recited as generically as possible. The description of each of these components is functional. *See id.*, 838 F.3d at 1258 (finding abstract a patent claim that included a cellular telephone, a graphical user interface, and a downloadable application, because "the claimed invention [was] entirely functional in nature"). "There is nothing in claim 1 that is directed to *how* to implement the [idea]. Rather, the claim is drawn to the idea itself." *Id.* Put another way, "the recited physical components 'merely provide a generic environment in which to carry out the abstract idea ….'" *Id.* at 1260 (citing *In re TLI Comms. LLC Patent Litigation*, 823 F.3d 607, 611 (Fed. Cir. 2016)). To the extent the preamble is limiting: a system was well-understood, routine and conventional in the relevant industry at the relevant time period, including for the reasons described above. This claim limitation as well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art references at the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. Accordingly, the preamble, and claim 1 in its entirety, do not claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[1a] multiple machines; and	Multiple machines were well understood, routine and conventional in the relevant industry at the relevant time period.

	Reciting "multiple machines" merely recites a generic structure without any particular function. At the relevant time, multiple machines and systems in which a centralized controller controls multiple machines were well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [1a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[1b] a relation server for storing a relation profile including a task processing schedule parameter which defines a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes,	A relation server for storing a relation profile including a task processing schedule parameter which defines a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes was well-understood, routine and conventional in the relevant industry at the relevant time period. The relation server of this claim is nothing more than a generic computer and does nothing more than perform the generic computer functions of storing information and sending requests. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,*

	830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, a server storing a profile including a task processing schedule parameter which defined a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [1b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[1c] wherein the relation server generates a new relation profile based on an intervention by a user in the relation profile,	Wherein the relation server generates a new relation profile based on an intervention by a user in the relation profile was well-understood, routine and conventional in the relevant industry at the relevant time period.

	The relation server of this claim is nothing more than a generic computer and does nothing more than perform the generic computer functions of generating and storing information based on user intervention. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, a server storing a profile including a task processing schedule parameter which defined a sequence of performing multiple processes, and for requesting selected machines of the multiple machines to perform the multiple processes was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [1c] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).

[1d] wherein the task processing schedule parameter configures a start time of at least one process of the multiple processes, and	Wherein the task processing schedule parameter configures a start time of at least one process of the multiple processes was well-understood, routine and conventional in the relevant industry at the relevant time period. The task processing schedule parameter of this claim is nothing more than generic computer data or a generic computer variable, and recites nothing but the generic computer function of defining information based on data, particularly, defining a start time of at least one process based on the data represented by the task processing schedule parameter. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, a task processing schedule parameter configures a start time of at least one process of the multiple processes was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [1c] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction*

	& Transmission LLC v. Wells Fargo Bank, National Ass'n, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[1e] wherein the multiple machines includes at least one of a home appliance, a smart phone or a search engine.	Multiple machines including at least one of a home appliance, a smart phone, or a search engine were well understood, routine and conventional in the relevant industry at the relevant time period. Reciting "multiple machines including at least one of a home appliance, a smart phone, or a search engine" merely recites a generic structures. At the relevant time, home appliances, smart phones, and search engines were all well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [1e] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
2[pre]. The system of claim 1, wherein:	*See* response to Claim 1, which is incorporated in full by reference here.

[2a] a first machine of the multiple machines forwards a command received from the user to the relation server,	A first machine of the multiple machines forwards a command received from the user to the relation server was well-understood, routine and conventional in the relevant industry at the relevant time period. The first machine and relation server of this claim are nothing more than generic computer equipment, and the first machine does nothing more than perform the generic computer function of sending information to a server. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time a first machine of the multiple machines forwarding a command received from the user to the relation server was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [2a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction*

	& Transmission LLC v. Wells Fargo Bank, National Ass'n, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[2b] the relation server controls the selected machines for performing the multiple processes according to the command, and	The relation server controls the selected machines for performing the multiple processes according to the command well-understood, routine and conventional in the relevant industry at the relevant time period. The relation server of this claim is nothing more than a generic computer, and the server does nothing more than perform the generic computer function of sending information to particular machines in order to control the machines. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time the relation server controlling the selected machines for performing the multiple processes according to the command was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts.

	Accordingly, limitation [2b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[2c] the selected machine includes the first machine.	The selected machines includes the first machine was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a "first machine" merely recites a generic structure without any particular function. At the relevant time, multiple machines and systems in which a centralized controller controls multiple machines were well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [2c] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).

3[pre]. The system of claim 2, wherein:	*See* response to Claim 2, which is incorporated in full by reference here.
[3a] the command includes a reservation or a payment.	A command including a reservation or a payment was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a command including a reservation or a payment recites only a generic structure—a command—that performs the function of a reservation or a payment. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a command including a reservation or a payment was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [3a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
4[pre]. The system of claim 2, wherein:	*See* response to Claim 2, which is incorporated in full by reference here.

[4a] the relation profile includes a capability set parameter, and	A relation profile including a capability set parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a relation profile including a capability set parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a relation profile including a capability set parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [4a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[4b] the capability set parameter corresponds to information about capabilities required for performing the command.	A capability set parameter corresponding to information about capabilities required for performing the command was well understood, routine and conventional in the relevant industry at the relevant time period.

	Reciting a capability set parameter corresponding to certain information recites only a generic structure—a parameter—that performs the function of corresponding to or representing information about capabilities required for performing the command. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a relation profile including a capability set parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [4b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
5[pre]. The system of claim 2, wherein:	*See* response to Claim 2, which is incorporated in full by reference here.
[5a] the relation profile includes a group parameter, and	A relation profile including a group parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a relation profile including a group parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional

	descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a relation profile including a group parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [5a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[5b] the group parameter corresponds to identities of machines required for performing the command.	A group parameter corresponding to identities of machines required for performing the command was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a group parameter corresponding to certain information recites only a generic structure—a parameter—that performs the function of corresponding to or representing identities of machines required for performing the command. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016).

	At the relevant time, a group parameter corresponding to identities of machines required for performing the command was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [5b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
6[pre]. The system of claim 2, wherein:	*See* response to Claim 2, which is incorporated in full by reference here.
[6a] the relation profile includes a group identity parameter, and	A relation profile including a group identity parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a relation profile including a group identity parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a relation profile including a group identity parameter was well-known, routine and conventional in the art.

	The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [6a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[6b] the group identity parameter corresponds to an identity of a group consisting of machines required for performing the command.	A group identity parameter corresponding to an identity of a group consisting of machines required for performing the command was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a group identity parameter corresponding to certain information recites only a generic structure—a parameter—that performs the function of corresponding to or representing identities of machines required for performing the command. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a group identity parameter corresponding to an identity of a group consisting of machines required for performing the command was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time.

	This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [6b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
7[pre]. The system of claim 2, wherein:	*See* response to Claim 2, which is incorporated in full by reference here.
[7a] the relation profile includes a task description parameter,	A relation profile including a task description parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a relation profile including a group identity parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a relation profile including a task description parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but

	not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [7a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[7b] the task description parameter corresponds to information related to the command, and the information is saved in a form of text.	A task description parameter corresponding to information related to the command and saved in a form of text was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a task description parameter corresponding to certain information recites only a generic structure—a parameter—that performs the function of corresponding to or representing information related to the command. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). Moreover, storing information in a form of text is generic computer functionality, and thus does not supply an inventive concept. S*ee also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, a task description parameter corresponding to information related to the command and saved in a form of text was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time.

	This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [7b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
8[pre]. The system of claim 1, wherein:	*See* response to Claim 1, which is incorporated in full by reference here.
[8a] the task processing schedule parameter includes a sub-parameter configuring a start condition of at least one process of the multiple processes, or a sub-parameter configuring an allocated machine identity of at least one process of the multiple processes.	The task processing schedule parameter including a sub-parameter configuring a start condition of at least one process of the multiple processes, or a sub-parameter configuring an allocated machine identity of at least one process of the multiple processes was well-understood, routine and conventional in the relevant industry at the relevant time period. The task processing schedule parameter of this claim is nothing more than generic computer data or a generic computer variable, and recites nothing but the generic computer function of defining information based on data, particularly, including further information regarding certain sub-parameters. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). Further, reciting sub-parameters configuring certain information recites only a generic structure—a parameter—that performs the function of configuring. "Such vague, functional

	descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, the task processing schedule parameter including a sub-parameter configuring a start condition of at least one process of the multiple processes, or a sub-parameter configuring an allocated machine identity of at least one process of the multiple processes was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [8a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
9[pre]. The system of claim 1, wherein:	*See* response to Claim 1, which is incorporated in full by reference here.
[9a] the relation server stores multiple machine profiles of the multiple machines.	The relation server storing multiple machine profiles of the multiple machines was well-understood, routine and conventional in the relevant industry at the relevant time period. The relation server of this claim is nothing more than a generic computer and does nothing more than perform the generic computer functions of storing information. Such generic computer functionality and components are not an inventive concept, and are well known,

	routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, the relation server storing multiple machine profiles of the multiple machines was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [9a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
10[pre]. The system of claim 9, wherein:	*See* response to Claim 9, which is incorporated in full by reference here.
[10a] at least one machine profile of the multiple machine profiles includes a status parameter, and	At least one machine profile of the multiple machine profiles including a status parameter was well understood, routine and conventional in the relevant industry at the relevant time period.

	Reciting a machine profile including a status parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, at least one machine profile of the multiple machine profiles including a status parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [10a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[10b] the status parameter includes at least one sub-parameter of a current operation status sub-parameter, a current availability sub-parameter, a current process sub-parameter, a scheduled termination time of current process sub-parameter, a current execution	The status parameter including at least one sub-parameter of a current operation status sub-parameter, a current availability sub-parameter, a current process sub-parameter, a scheduled termination time of current process sub-parameter, a current execution function sub-parameter, or a scheduled termination time of currently executed function sub-parameter was well understood, routine and conventional in the relevant industry at the relevant time period.

function sub-parameter, or a scheduled termination time of currently executed function sub-parameter.	Reciting a status parameter including at least one sub-parameter recites only a generic structure—a parameter—that performs the function of including at least one sub-parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). Further, reciting sub-parameters recites only a generic structure—a parameter—that performs the function of representing certain information. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a group identity parameter corresponding to an identity of a group consisting of machines required for performing the command was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [10b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
11[pre]. The system of claim 9, wherein:	*See* response to Claim 9, which is incorporated in full by reference here.

[11a] at least one machine profile of the multiple machine profiles includes a capability parameter, and	At least one machine profile of the multiple machine profiles including a capability parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a machine profile including a capability parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, at least one machine profile of the multiple machine profiles including a capability parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [11a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[11b] the capability parameter includes at least one sub-parameter of a title of process sub-parameter, an input parameter sub-parameter,	The capability parameter including at least one sub-parameter of a title of process sub-parameter, an input parameter sub-parameter, an output parameter sub-parameter, a process processing time sub-parameter, a process processing condition sub-parameter, or a function

an output parameter sub-parameter, a process processing time sub-parameter, a process processing condition sub-parameter, or a function sub-parameter.	sub-parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a capability parameter including at least one sub-parameter recites only a generic structure—a parameter—that performs the function of including at least one sub-parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). Further, reciting sub-parameters recites only a generic structure—a parameter—that performs the function of representing certain information. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a capability parameter including at least one sub-parameter of a title of process sub-parameter, an input parameter sub-parameter, an output parameter sub-parameter, a process processing time sub-parameter, a process processing condition sub-parameter, or a function sub-parameter was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [11b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction*

	& Transmission LLC v. Wells Fargo Bank, National Ass'n, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
12[pre]. The system of claim 9, wherein:	*See* response to Claim 9, which is incorporated in full by reference here.
[12a] at least one machine profile of the multiple machine profiles includes a machine identity parameter.	At least one machine profile of the multiple machine profiles including a machine identity parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a machine profile including a machine identity parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, at least one machine profile of the multiple machine profiles including a machine identity parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [12a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).

13[pre]. The system of claim 9, wherein:	*See* response to Claim 9, which is incorporated in full by reference here.
[13a] at least one machine profile of the multiple machine profiles includes a user identity parameter, and	At least one machine profile of the multiple machine profiles including a user identity parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a machine profile including a user identity parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, at least one machine profile of the multiple machine profiles including a user identity parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [13a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).

[13b] the user identity parameter corresponds to an identity of a user being capable of using a machine corresponding to the at least one machine profile.	The user identity parameter corresponding to an identity of a user being capable of using a machine corresponding to the at least one machine profile was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a user identity parameter corresponding to certain information recites only a generic structure—a parameter—that performs the function of corresponding to or representing certain information. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a user identity parameter corresponding to an identity of a user being capable of using a machine corresponding to the at least one machine profile was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [13b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
14[pre]. The system of claim 9, wherein:	*See* response to Claim 9, which is incorporated in full by reference here.

[14a] at least one machine profile of the multiple machine profiles includes a group identity parameter, and	At least one machine profile of the multiple machine profiles including a group identity parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a machine profile including a group identity parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, at least one machine profile of the multiple machine profiles including a group identity parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [14a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[14b] the group identity parameter corresponds to an identity of a user group being capable of using a	The group identity parameter corresponding to an identity of a user group being capable of using a machine corresponding to the at least one machine profile was well understood, routine and conventional in the relevant industry at the relevant time period.

machine corresponding to the at least one machine profile.	Reciting a group identity parameter corresponding to certain information recites only a generic structure—a parameter—that performs the function of corresponding to or representing certain information. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, a group identity parameter corresponding to an identity of a user group being capable of using a machine corresponding to the at least one machine profile was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [14b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
15[pre]. The system of claim 8, wherein:	*See* response to Claim 8, which is incorporated in full by reference here.
[15a] at least one machine profile of the multiple machine profiles includes an operating system parameter, and	At least one machine profile of the multiple machine profiles including an operating system parameter was well understood, routine and conventional in the relevant industry at the relevant time period.

	Reciting a machine profile including an operating system parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, at least one machine profile of the multiple machine profiles including an operating system parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [15a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[15b] the operating system parameter corresponds to a type of an operating system which is used by a machine corresponding to the at least one machine profile.	The operating system parameter corresponding to a type of an operating system which is used by a machine corresponding to the at least one machine profile was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting an operating system parameter corresponding to certain information recites only a generic structure—a parameter—that performs the function of corresponding to or representing certain information. "Such vague, functional descriptions . . . are insufficient to

	transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016). At the relevant time, an operating system parameter corresponding to a type of an operating system which is used by a machine corresponding to the at least one machine profile was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [15b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
16[pre]. The system of claim 8, wherein:	*See* response to Claim 8, which is incorporated in full by reference here.
[16a] at least one machine profile of the multiple machine profiles includes an interface parameter, and	At least one machine profile of the multiple machine profiles including an interface parameter was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting a machine profile including an interface parameter recites only a generic structure—a profile—that performs the function of including a parameter. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016).

	At the relevant time, at least one machine profile of the multiple machine profiles including an interface parameter was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [16a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
[16b] the interface parameter corresponds to an interface protocol between the relation server and a machine corresponding to the at least one machine profile.	The interface parameter corresponding to an interface protocol between the relation server and a machine corresponding to the at least one machine profile was well understood, routine and conventional in the relevant industry at the relevant time period. Reciting an interface parameter corresponding to certain information recites only a generic structure—a parameter—that performs the function of corresponding to or representing certain information. "Such vague, functional descriptions . . . are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016).

	At the relevant time, a interface parameter corresponding to an interface protocol between the relation server and a machine corresponding to the at least one machine profile was well understood, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well known, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [16b] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
17[pre]. The system of claim 1, wherein:	*See* response to Claim 1, which is incorporated in full by reference here.
[17a] the relation server saves information related to grouping the multiple machines.	The relation server saving information related to grouping the multiple machines was well-understood, routine and conventional in the relevant industry at the relevant time period. The relation server of this claim is nothing more than a generic computer and does nothing more than perform the generic computer functions of saving information. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was

	well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, the relation server saving information related to grouping the multiple machines was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [17a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
18[pre]. The system of claim 1, wherein:	*See* response to Claim 1, which is incorporated in full by reference here.
[18a] the relation server generates a capability set required to execute a user command, and generates the task processing schedule parameter according to the capability set, a status parameter of at least one machine of the multiple machines,	The relation generating a capability set required to execute a user command, and generating the task processing schedule parameter according to the capability set, a status parameter of at least one machine of the multiple machines, and a capability parameter of the at least one machine was well-understood, routine and conventional in the relevant industry at the relevant time period. The relation server of this claim is nothing more than a generic computer and does nothing more than perform the generic computer functions of generating output information based on

and a capability parameter of the at least one machine.	input information. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, the relation generating a capability set required to execute a user command, and generating the task processing schedule parameter according to the capability set, a status parameter of at least one machine of the multiple machines, and a capability parameter of the at least one machine was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [18a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).
19[pre]. The system of claim 1, wherein:	*See* response to Claim 1, which is incorporated in full by reference here.

[19a] the intervention includes selecting some processes of the multiple processes.	Wherein the intervention includes selecting some processes was well-understood, routine and conventional in the relevant industry at the relevant time period. The claim recites nothing more than generic user interaction with a generic computer; particularly, a user providing a selection. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, an intervention including selecting some processes was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [19a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).

20[pre]. The system of claim 1, wherein:	*See* response to Claim 1, which is incorporated in full by reference here.
[20a] the intervention includes approving the multiple processes.	Wherein the intervention includes approving multiple processes was well-understood, routine and conventional in the relevant industry at the relevant time period. The claim recites nothing more than generic user interaction with a generic computer; particularly, a user providing an approval. Such generic computer functionality and components are not an inventive concept, and are well known, routine, and conventional. *See Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1355 (Fed. Cir. 2016) ("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."); *see also Angel Techs. Grp., LLC v. Meta Platforms, Inc.*, 2024 WL 4212196, at *5 (Fed. Cir. Sept. 17, 2024) (claim was well known, routine, and convention where it "require[d] only generic computer components that perform generic computer functions."). At the relevant time, an intervention including approving the multiple processes was well-known, routine and conventional in the art. The above description of the industry shows that this element, both individually and in combination with other elements of that claim, was well understood, routine, and conventional, in the relevant industry at the relevant time. This claim limitation was well understood, routine, and conventional at the relevant time, as shown by its disclosure in numerous prior art reference as of the relevant time, including but not limited to the references listed in Defendants' Invalidity Contentions at List B as to this claim element and their corresponding claim charts. Accordingly, limitation [20a] fails to claim "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction*

	& Transmission LLC v. Wells Fargo Bank, National Ass'n, 776 F.3d 1343, 1347-48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359).