

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

KAIFI LLC,

Plaintiff,

vs.

AMAZON.COM, INC.; AMAZON.COM  
SERVICES LLC; and AMAZON WEB  
SERVICES, INC.

Defendants.

Case No. 2:24-cv-00542

**DEFENDANTS' INITIAL INVALIDITY CONTENTIONS AND ADDITIONAL  
DISCLOSURES PURSUANT TO LOCAL PATENT RULES FOR U.S. PATENT NO.  
11,082,518**

## **I. INTRODUCTION**

Pursuant to the Court’s Docket Control Order (Dkt. No. 37), the Court’s Discovery Order (Dkt. No. 39), this District’s Patent Local Rules, and Plaintiff KAIFI LLC’s (“KAIFI”) Disclosure of Asserted Claims and Infringement Contentions (“Initial Infringement Contentions”), served November 14, 2024, Defendants Amazon.com, Inc., Amazon.com Services LLC, and Amazon Web Services, Inc. (collectively, “Defendants”) submit the following Initial Invalidation Contentions and additional disclosures relative to U.S. Patent No. 11,082,518 (the “’518 Patent”), claims 1-20 (the claims alleged by KAIFI to be infringed).

KAIFI’s Initial Infringement Contentions are deemed to be its final contentions pursuant to Patent Local Rule 3-6. Should the Court allow KAIFI to later assert infringement of additional claims not asserted in KAIFI’s Initial Infringement Contentions, or to supplement its Initial Infringement Contentions with additional infringement theories with respect to the asserted claims (by Court order or otherwise), Defendants reserve the right to supplement their Initial Invalidation Contentions to assert invalidity of those additional claims and/or to assert invalidity based on the additional infringement theories. Defendants also reserve the right to supplement their Initial Invalidation Contentions in response to information learned in fact or expert discovery, including identification of additional prior art.

These Initial Invalidation Contentions are also submitted in compliance with and in satisfaction of the notice requirements of 35 U.S.C. § 282(c).

## **II. PRELIMINARY MATTERS**

Defendants’ Initial Invalidation Contentions are based in whole or in part on its present understanding of the asserted claims and KAIFI’s Initial Infringement Contentions, including the priority date of November 3, 2015 for the ’518 Patent as asserted by KAIFI in its Initial

Infringement Contentions. That said, Defendants dispute that the asserted claims of the patents-in-suit are entitled to the priority dates that KAIFI has asserted in its infringement contentions.

Defendants' Initial Invalidity Contentions as to the '518 Patent are responsive at least to the same level of specificity as KAIFI's Initial Infringement Contentions. Defendants' Initial Invalidity Contentions may also take into account KAIFI's apparent claim constructions, to the extent KAIFI's constructions can be gleaned from KAIFI's Initial Infringement Contentions or other allegations. Such apparent constructions may be inconsistent with the constructions that Defendants ultimately will proffer in this case. By including prior art that would anticipate or render obvious the asserted claims of the patents-in-suit based on KAIFI's apparent or disclosed claim constructions, or based on any other particular claim construction, Defendants are not adopting KAIFI's claim constructions, nor are Defendants admitting to the accuracy of any particular claim construction. Solely for the purpose of these Initial Invalidity Contentions, Defendants may, if necessary, apply alternative, and even inconsistent, claim construction positions. Defendants reserve all rights to further amend these Initial Invalidity Contentions after the Court issues its claim construction ruling, or if the Court permits KAIFI to amend its Initial Infringement Contentions.

Defendants, however, do not concede that KAIFI's Initial Infringement Contentions provide the requisite level of specificity. On the contrary, it is Defendants' position that KAIFI's Initial Infringement Contentions are deficient and fail to comply with the Court's Docket Control Order, the Local and Patent Rules of the Eastern District of Texas, and/or the Federal Rules of Civil Procedure, including for the reasons identified by Defendants in their letter to KAIFI dated November 25, 2024. Defendants therefore provide these Initial Invalidity Contentions without waiving any right to receive from KAIFI full and complete specific infringement contentions.

Moreover, nothing herein admits in any way that any of the accused devices or methods, or any of Defendant's other devices or methods, infringe any of the asserted claims.

**A. Ongoing Investigation**

Defendants' discovery and investigation in connection with this lawsuit is continuing. Thus, these Initial Invalidity Contentions are based on information obtained to date. Among other things, discovery is still underway, witnesses remain to be deposed, and the Court has not yet construed any terms of the patents-in-suit. Accordingly, Defendants' Initial Invalidity Contentions are subject to modification, amendment, or supplementation in accordance with the Court's Docket Control Order, the Local and Patent Rules of the Eastern District of Texas, and/or the Federal Rules of Civil Procedure as this action progresses and additional information is obtained.

**III. DISCLOSURES PURSUANT TO P.R. 3-3**

**A. Disclosures Pursuant to P.R. 3-3(a)**

Defendants identify the following prior art to the patents-in-suit. Defendants contend that the prior art disclosed below generally all relate to systems and methods for centralized control of home/building automation. As such, the below-disclosed prior art, collectively, are all relevant at least as background of the art to the 518 Patent, irrespective of the sub-section(s) in which they are expressly cited. Defendants expressly reserve the right to at least use and rely on any of the prior art cited herein to establish or otherwise support Defendants' contentions as to what was known in the state of the art during the pertinent time frame for the patents-in-suit.

**1. Prior Art Patents and Published Patent Applications**

The following prior art patents and published patent applications are relevant to the invalidity of '518 Patent:

Reference	Number	Origin	Title	Inventor(s)	Date of Issue or Publication
Addepalli '581	9,083,581	US	System and method for providing resource sharing, synchronizing, media coordination, transcoding, and traffic management in a vehicular environment	Addepalli <i>et al.</i>	5/19/2011
Arling '239	10,991,239	US	System and method for optimized appliance control	Arling <i>et al.</i>	12/20/2013
Bamberger '627	7,085,627	US	Integrated system for controlling lights and shades	Bamberger <i>et al.</i>	8/1/2006
Byeong-ok '094	100766094	KR	Home network system based voice interface and method for controlling thereof	Byeong-ok	10/12/2007
Candelore '942	8,629,942	US	Decoding multiple remote control code sets	Candelore	11/16/2011
Christensen '764	2001/77764	WO	RF home automation system comprising replicable controllers	Christensen <i>et al.</i>	10/18/2001
Cipollo '336	10,042,336	US	User-defined scenes for home automation	Cipollo <i>et al.</i>	9/9/2014
Clair '779	8,909,779	US	System and method for control and monitoring of multiple devices and inter-device connections	Clair <i>et al.</i>	6/28/2012

Reference	Number	Origin	Title	Inventor(s)	Date of Issue or Publication
Clark '966	9,391,966	US	Devices for providing secure remote access	Clark <i>et al.</i>	3/8/2013
Dixon '495	2022/0360495	US	Device communication, monitoring, and control architecture and method	Dixon <i>et al.</i>	7/7/2010
Economy '977	9,544,977	US	Method of programming a load control device using a smart phone	Economy <i>et al.</i>	6/29/2012
Ehsani '560	9,230,560	US	Smart home automation systems and methods	Ehsani <i>et al.</i>	10/8/2013
Ermis '091	2012/0079091	US	Management of data flows between networked resource nodes in a social web	Ermis <i>et al.</i>	3/29/2012
Feldstein '082	9,366,082	US	Shading control network using a control network	Feldstein <i>et al.</i>	6/17/2014
Feldstein '203	2012/0158203	US	Personal energy management system	Feldstein <i>et al.</i>	6/21/2012
Franco '593	2,983,593	FR	Systems and methods for configuring and using automated systems in buildings	Franco <i>et al.</i>	6/7/2013
Gluck '659	2003/038659	WO	Method and apparatus for remotely activating appliances or devices	Gluck <i>et al.</i>	5/8/2003
Imes '532	10,310,532	US	Zone based system for altering an operating condition	Imes <i>et al.</i>	7/3/2014

Reference	Number	Origin	Title	Inventor(s)	Date of Issue or Publication
Jobanputra '091	9,032,091	US	Apparatus and method for managing a network of intelligent devices	Jobanputra <i>et al.</i>	11/16/2006
Kelly '231	9,713,231	US	Light switch controlling light source via wireless transmission	Kelly <i>et al.</i>	6/25/2015
Killian '538	10,230,538	US	User interface for multi-device control	Killian <i>et al.</i>	10/4/2011
Kim '242	9,665,242	US	Apparatus and method for remotely controlling peripheral devices in mobile communication terminal	Kim <i>et al.</i>	10/7/2014
Kim '571	2006/0190571	US	Service framework for home network	Kim <i>et al.</i>	8/24/2006
Klemets '093	8,307,093	US	Remote access between UPnP devices	Klemets <i>et al.</i>	6/25/2008
Krzyzanowski '256	7,024,256	US	Method, system, and computer program product for automatically managing components within a controlled environment	Krzyzanowski <i>et al.</i>	4/4/2006
Lee Ermis '347	2011/0010347	KR	Home network control apparatus and control method thereof	Lee <i>et al.</i>	2/1/2011
Li '534	RE44534	US	Dynamic machine synthesis for wireless device access and management	Li <i>et al.</i>	1/31/2006

Reference	Number	Origin	Title	Inventor(s)	Date of Issue or Publication
Madonna '125	9,153,125	US	Programmable multimedia controller with programmable services	Madonna <i>et al.</i>	12/20/2005
Matsuoka '230	9,256,230	US	HVAC schedule establishment in an intelligent, network-connected thermostat	Matsuoka <i>et al.</i>	3/15/2013
Matthews '432	9,420,432	US	Mobile devices control	Matthews, III <i>et al.</i>	12/22/2012
Minezawa '543	2016/0301543	US	Appliance control system, home controller, remote control method, and recording medium	Minezawa <i>et al.</i>	6/17/2014
Mosebrook '442	5,905,442	US	Method and apparatus for controlling and determining the status of electrical devices from remote locations	Mosebrook <i>et al.</i>	5/18/1999
Nakano '391	9,720,391	US	Coordination processing execution method and coordination processing execution system	Nakano <i>et al.</i>	2/13/2014
Part '528	7,805,528	US	User interface apparatus for context-aware environments, device controlling apparatus and method thereof	Park <i>et al.</i>	9/28/2010

Reference	Number	Origin	Title	Inventor(s)	Date of Issue or Publication
Peco '751	10,826,751	US	Management of functional interconnections between application modules on resource nodes in a social web	Peco <i>et al.</i>	11/11/2014
Qi '561	9,538,561	US	Systems and methods for enabling service interoperability functionality for WiFi direct devices connected to a network via a wireless access point	Qi <i>et al.</i>	9/24/2013
Ricci '601	9,378,601	US	Providing home automation information via communication with a vehicle	Ricci <i>et al.</i>	11/16/2014
Rodriguez '087	7,124,087	US	System and method for updating user home automation systems	Rodriguez <i>et al.</i>	10/17/2006
Sasaki '562	2015/0067562	US	Control method for information apparatus and computer-readable recording medium	Sasaki <i>et al.</i>	9/10/2014
Shin '704	2013/364704	AU	Method of managing external devices, method of operating external devices, host device, management server, and external device	Sin	12/13/2013

Reference	Number	Origin	Title	Inventor(s)	Date of Issue or Publication
Singh '199	11,818,199	US	Cross device application discovery and control	Singh <i>et al.</i>	10/7/2014
Smith '106	7,594,106	US	Method and apparatus for device detection and multi-mode security in a control network	Smith <i>et al.</i>	9/22/2009
Smith '778	9,876,778	US	Devices for providing secure remote access	Smith <i>et al.</i>	3/23/2015
Steiner '212	2006/00282 12	US	System and method for graphically grouping electrical devices	Steiner <i>et al.</i>	2/9/2006
Stricken '365	8,903,365	US	Mobile device management	Stricken <i>et al.</i>	3/20/2008
Wang '558	9,633,558	US	Processing method and apparatus for implementing control of target device	Wang	12/26/2013
Weisman '724	7,620,724	US	Peer networking host framework and hosting API	Weisman <i>et al.</i>	11/17/2009
Wenzel '238	8,843,238	US	Systems and methods for controlling energy use in a building management system using energy budgets	Wenzel <i>et al.</i>	9/30/2011
Yabe '222	2016/00852 22	US	Controller, control system, control method, and non-transitory computer-readable recording medium	Yabe <i>et al.</i>	3/28/2014

Reference	Number	Origin	Title	Inventor(s)	Date of Issue or Publication
Yoon '217	101,010,217	KR	Home network system and operating method thereof	Yoon <i>et al.</i>	6/16/2009
Yu '818	9,432,818	US	Controlling communication devices	Yu <i>et al.</i>	2/11/2010
Zaloshnja '021	2013/046021	WO	Management of functional interconnections between application modules on resource nodes in a social web	Zaloshnja <i>et al.</i>	4/4/2013
Zhang '350	101304250	CN	Method and system for accessing household network equipment as well as household network access equipment	Zhang <i>et al.</i>	5/11/2007
Zhang '562	8,908,562	US	Method for remotely managing a sensor network topology and gateway	Zhang <i>et al.</i>	4/29/2013
Zhang '598	2010/0177598	US	Methods and apparatuses for a network enabled alarm clock	Zhang <i>et al.</i>	7/15/2010
Zhang '953	9,331,953	US	Device management method, middleware, and machine-to-machine communications platform, device, and system	Zhang <i>et al.</i>	4/1/2013

## 2. Non-Patent Prior Art Publications

The following non-patent prior art publications are relevant to the invalidity of the asserted claims of the '518 Patent:

Reference	Title	Author	Publication Date	Publisher
Agnetis	<i>Load Scheduling for Household Energy Consumption Optimization</i>	Agnetis <i>et al.</i>	December 13	IEEE
Bayrakdar	<i>Smart Home Project Software Requirements Specifications</i>	Bayrakdar <i>et al.</i>	1/18/2013	Middle East Technical University Computer Engineering Department
Fernandez	<i>An Integrated and Low Cost Home Automation System with Flexible Task Scheduling</i>	Fernandez <i>et al.</i>	June 2014	XV Workshop of Physical Agents, 2004
Koutitas	<i>Control of Flexible Smart Devices in the Smart Grid</i>	Koutitas	September 2012	IEEE
Schaefer	<i>Profile Processing and Evolution for Smart Environments</i>	Schaefer <i>et al.</i>	2006	International Conference on Ubiquitous Intelligence and Computing, 2006
Son	<i>Resource-Aware Smart Home Management System by Constructing Resource Relation Graph</i>	Son <i>et al.</i>	August 2011	IEEE
Zigbee	<i>Zigbee Home Automation Public Application Profile</i>	Zigbee Alliance	6/6/2013	Zigbee Alliance

## 3. Items Offered for Sale or Publicly Used or Known

Numerous systems are prior art to the patents in suit under at least 35 U.S.C. §§ 102(a), (b), (e), and/or (g), and anticipate and/or render obvious all asserted claims of the patents-in-suit.

These systems include physical implementations of prior art patents, patent applications, and publications identified herein that were known, made, used, sold, offered for sale, or imported into this country prior to the effective filing dates of the patents-in-suit, including those described by the prior art patents, patent applications, and publications listed in the previous section.

Defendants further identify the following products that were sold, offered for sale, publicly used, or known that incorporate the claimed elements of the '518 Patent.

No.	System or Product	Date of First Offer or Public Disclosure	Circumstances
1	Amazon Echo 1 <sup>st</sup> Generation	No later than November 2014	<p>The Amazon Echo 1<sup>st</sup> Generation system does not practice the claims of the '518 Patent and nothing herein should be construed as an admission of infringement. However, to the extent KAIFI contends that the Amazon Echo 1<sup>st</sup> Generation does practice the claims of the '518 Patent, the Amazon Echo 1<sup>st</sup> Generation was first offered for sale before the '518 Patent's alleged priority date. <i>See, e.g.,</i> <a href="https://www.theverge.com/2014/11/6/7167793/amazon-echo-speaker-announced">https://www.theverge.com/2014/11/6/7167793/amazon-echo-speaker-announced</a> (Echo 1st Generation offered for sale to Amazon Prime members as of November 6, 2014); <a href="https://www.cnbc.com/2014/11/06/amazon-surprises-with-new-device-a-voice-assistant.html">https://www.cnbc.com/2014/11/06/amazon-surprises-with-new-device-a-voice-assistant.html</a> (same). Accordingly, if, as KAIFI contends, the Echo 1<sup>st</sup> Generation system practices the claims of the '518 Patent, then the Echo 1<sup>st</sup> Generation system anticipates and/or renders obvious the claims of the '518 Patent. <i>Peters v. Active Mfg. Co.</i> (1889) ("That which infringes, if later, would anticipate, if earlier.").</p>
2	Crestron System	No later than 2014	<p>"Crestron builds the technology that integrates all of the disparate systems and devices in buildings and homes on a single open platform so they can communicate and work together intelligently. [Crestron] provide[s] the only solution that enables you to monitor, manage, and control everything from one platform, anywhere,</p>

No.	System or Product	Date of First Offer or Public Disclosure	Circumstances
			<p>anytime, using touch screens, remotes, and smart devices.”</p> <p><i>See</i>  <a href="https://www.domoticsystems.be/userfiles/files/2014_product_brochure.pdf">https://www.domoticsystems.be/userfiles/files/2014_product_brochure.pdf</a>.</p>
3	Ecobee Energy Management System	No later than 2014	<p>“ecobee’s Energy Management System is perfect for situations where a simple thermostat just isn’t enough and a full-scale building automation system would be costly and overly complex . . . You don’t have to be at your building to stay on top of your building operations. Through the Web Portal, you can apply changes across unlimited thermostats and multiple locations with a single click.” <i>See</i>  <a href="https://web.archive.org/web/20140911051102/http://www.ecobee.com/solutions/business/ems/">https://web.archive.org/web/20140911051102/http://www.ecobee.com/solutions/business/ems/</a>.</p>
4	Google Nest	No later than October 2015	<p>Nest’s product line included the Nest Learning Thermostat, Nest Protect, and Nest Cam. Further, “all Nest products can be controlled from a single app, [Nest app 5.0]. On the home screen, each Nest thermostat, Nest Cam or Dropcam has its own spot, while all Nest Protects roll up into one icon. It’s now easier to get and use popular thermostat functions like Energy History, Heat/Cool mode, and schedule. For the Nest Protect, the app provides access to Safety Checkup, which lets you test all alarms from the app, and App Silence lets you quiet false alarms from your phone.” <i>See</i>  <a href="http://www.achrnews.com/articles/129878-nest-updates-its-entire-product-line">www.achrnews.com/articles/129878-nest-updates-its-entire-product-line</a>.</p>
5	Honeywell Lyric Home Automation System	No later than October 2015	<p>The Honeywell Lyric Home Automation System included various devices, including thermostats, cameras, motion sensors, smoke detectors, lights, locks, and window shades and more. All devices were “controllable via a physical touchscreen display, customized voice controls, and the Lyric app.” The Lyric app further allowed users to “automate [their] entire house from a central hub.” <i>See</i></p>

No.	System or Product	Date of First Offer or Public Disclosure	Circumstances
			<a href="https://www.cnet.com/reviews/honeywell-lyric-home-security-system-preview/">https://www.cnet.com/reviews/honeywell-lyric-home-security-system-preview/</a> .
6	If This Then That (“IFTTT”)	No later than 2013	<p>“IFTTT is a service that lets you create powerful connections with one simple statement : if this then that. Channels are the basic building blocks of IFTTT. Each channels has its own Triggers and Actions.” <i>See</i> <a href="https://web.archive.org/web/20131201164544/https://ifttt.com/wtf">https://web.archive.org/web/20131201164544/https://ifttt.com/wtf</a>. IFTTT Channels included internet of things devices, including, for example, Phillips hue, WeMo Insight Switch, WeMo Light Switch, WeMo Motion, and Wemo Switch. <i>See</i> <a href="https://web.archive.org/web/20131201164544/https://ifttt.com/wtf">https://web.archive.org/web/20131201164544/https://ifttt.com/wtf</a></p> <p>“The <b>this</b> part of a Recipe is a Trigger. Som example Triggers are ‘I’m tagged in a photo on Facebook’ or ‘I check in on Foursquare.” <i>See</i> <a href="https://web.archive.org/web/20131201164544/https://ifttt.com/wtf">https://web.archive.org/web/20131201164544/https://ifttt.com/wtf</a>.</p> <p>“The <b>that</b> part of a Recipe is an Action. Some example Actions are ‘send me a text message’ or ‘create a status message on Facebook.’” <i>See</i> <a href="https://web.archive.org/web/20131201164544/https://ifttt.com/wtf">https://web.archive.org/web/20131201164544/https://ifttt.com/wtf</a>.</p>
7	Savant Ecosystem	No later than 2014	<p>“Owning a Savant Home gives you control of your lighting, climate, entertainment, and security from anywhere, so everything is always exactly how you like it.” <i>See</i> <a href="https://web.archive.org/web/20150315001833/https://www.savant.com/about">https://web.archive.org/web/20150315001833/https://www.savant.com/about</a>. Via the Savant App, a user could dim lights, cue up music, lower shades, schedule climate and shade control, and monitor the status of various devices throughout their home. <i>See</i> <a href="https://web.archive.org/web/20150315033046/https://www.savant.com/products">https://web.archive.org/web/20150315033046/https://www.savant.com/products</a>.</p>
8	Simplify My Home System	No later than 2014	The Simplify My Home system included whole home automation for controlling devices throughout a house, including, for example,

No.	System or Product	Date of First Offer or Public Disclosure	Circumstances
			blinds and drapes, interior lights, audio devices, video device, motion sensors, sprinklers, and thermostats. <i>See</i> <a href="https://web.archive.org/web/20141007065908/http://www.simplifymyhome.com/wholehomeauto.php">https://web.archive.org/web/20141007065908/http://www.simplifymyhome.com/wholehomeauto.php</a> .
9	WeMo	No later than 2013	The WeMo system included the Wi-Fi enabled WeMo Insight Switch, which enabled users to connect home appliances and electronic device to their Wi-Fi network, allowing users to turn devices on or off, program customized notifications, and change device status remotely. WeMo App allowed users to create rules for controlling devices, schedule control of device, and receive notifications regarding device status. <i>See</i> <a href="https://web.archive.org/web/20131128062505/http://www.belkin.com/us/F7C029-Belkin/p/P-F7C029/">https://web.archive.org/web/20131128062505/http://www.belkin.com/us/F7C029-Belkin/p/P-F7C029/</a> .
10	Control4 System	No later than October 2015	“Control4 offers the ultimate home automation solution by making the products and systems you already have and use everyday, work together. By integrating everything from lighting control, music, home theater, climate control, security—even iPads, iPhones and Android smartphones and tablets—a smart house by Control4 creates personalized experiences.” <i>See</i> <a href="https://web.archive.org/web/20150302051444/https://www.control4.com/">https://web.archive.org/web/20150302051444/https://www.control4.com/</a> .
11	Samsung SmartThings	No later than October 2015	Samsung SmartThings allowed users to control and monitor devices across their home. The system included a centralized controller called a Hub, and was capable of controlling various other devices throughout the home, including multipurpose sensors, motion sensors, outlets, and cameras. <i>See</i> <a href="https://web.archive.org/web/20150905055001/https://www.samsung.com/us/smart-home/">https://web.archive.org/web/20150905055001/https://www.samsung.com/us/smart-home/</a> .
12	EnergyHub	No later than 2013	The EnergyHub system included a Dashboard, Socket, Powerstrip, and Consumer Web Portal that, together, enabled residential HVAC control,

No.	System or Product	Date of First Offer or Public Disclosure	Circumstances
			energy monitoring, and appliance management. A user could monitor and control all electrical devices and appliances in the home via the Dashboard. <i>See</i> <a href="https://energyhub.com/news/energyhub-and-con-edison-partner-to-bring-the-consumer-face-of-the-smart-grid-to-new-york-city-customers">https://energyhub.com/news/energyhub-and-con-edison-partner-to-bring-the-consumer-face-of-the-smart-grid-to-new-york-city-customers</a> .

Defendants continue to investigate the identities of individuals or entities involved in the first sale, offer for sale, or public use of prior art products that incorporate the claimed elements of the '518 Patent, and Defendants will continue to produce additional documents relating to the invalidity of the asserted claims by those products as they become available. Defendants reserve the right to provide additional invalidity contention information as additional information becomes available. Defendants also reserve the right to rely on documents associated with these systems.

**B. Disclosures Pursuant to P.R. 3-3(b)**

The prior art at issue in these contentions anticipates and/or renders obvious the claims of the '518 Patent as follows:

Reference	Claims Anticipated	Claims Rendered Obvious
Arling '239	1-2, 4-8, 10-11, 16-20	1-20
Arling '239 + Madonna '125		1-20
Arling '239 + Yabe '222		1-2, 4-8, 10-11, 13-14, 16-20
Cipollo '336	1, 4-11, 16-20	1-20
Cipollo '336 + Ehsani '560		1, 3, 4-11, 16-20
Cipollo '336 + Ermis '091		1-20

<b>Reference</b>	<b>Claims Anticipated</b>	<b>Claims Rendered Obvious</b>
Cipollo '336 + Madonna '125		1-20
Cipollo '336 + Steiner '212		1, 5-6, 4-11, 16-20
Cipollo '336 + Yabe '222		1, 4-11, 13-14
Control4		1-20
Control4 + Arling '239		1-2, 4-8, 10-11, 16-20
Control4 + Cipollo '336		1, 4-11, 16-20
Control4 + Ermis '091		1-20
Control4 + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
Control4 + Kelly '231		1-20
Control4 + Madonna '125		1-20
Control4 + Nakano '391		1-2, 4-15, 17
Control4 + Steiner '212		1, 5-6
Control4 + Yabe '222		1, 13-14
Crestron	1-3, 5-6, 8, 19-20	1-20
Crestron + Arling '239		1-2, 4-8, 10-11, 16-20
Crestron + Cipollo '336		1, 4-11, 16-20
Crestron + Ermis '091		1-20
Crestron + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20

<b>Reference</b>	<b>Claims Anticipated</b>	<b>Claims Rendered Obvious</b>
Crestron + Kelly '231		1-20
Crestron + Madonna '125		1-20
Crestron + Nakano '391		1-2, 4-15, 17
Crestron + Steiner '212		1, 5-6
Crestron + Yabe '222		1, 13-14
Ecobee		1-20
Ecobee + Arling '239		1-2, 4-8, 10-11, 16-20
Ecobee + Cipollo '336		1, 4-11, 16-20
Ecobee + Ermis '091		1-20
Ecobee + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
Ecobee + Kelly '231		1-20
Ecobee + Madonna '125		1-20
Ecobee + Nakano '391		1-2, 4-15, 17
Ecobee + Steiner '212		1, 5-6
Ecobee + Yabe '222		1, 13-14
EnergyHub		1-20
EnergyHub + Arling '239		1-2, 4-8, 10-11, 16-20
EnergyHub + Cipollo '336		1, 4-11, 16-20

<b>Reference</b>	<b>Claims Anticipated</b>	<b>Claims Rendered Obvious</b>
EnergyHub + Ermis '091		1-20
EnergyHub + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
EnergyHub + Kelly '231		1-20
EnergyHub + Madonna '125		1-20
EnergyHub + Nakano '391		1-2, 4-15, 17
EnergyHub + Steiner '212		1, 5-6
EnergyHub + Yabe '222		1, 13-14
Ermis '091	1-20	1-20
Feldstein '203	1-2, 4-6, 8-9, 12-14, 17-20	1-20
Feldstein '203 + Cipollo '336		1-2, 4-6, 7-9, 12-14, 17-20
Feldstein '203 + Ehsani '560		1-3, 4-6, 8-9, 12-14, 17-20
Feldstein '203 + Ermis '091		1-20
Feldstein '203 + Madonna '125		1-20
Feldstein '203 + Steiner '212		1-2, 4-6, 8-9, 12-14, 17-20
Feldstein '203 + Yabe '222		1-2, 4-6, 8-9, 12-14, 17-20
Google Nest		1-20
Google Nest + Arling '239		1-2, 4-8, 10-11, 16-20
Google Nest + Cipollo '336		1, 4-11, 16-20
Google Nest + Ermis '091		1-20

<b>Reference</b>	<b>Claims Anticipated</b>	<b>Claims Rendered Obvious</b>
Google Nest + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
Google Nest + Kelly '231		1-20
Google Nest + Madonna '125		1-20
Google Nest + Nakano '391		1-2, 4-15, 17
Google Nest + Steiner '212		1, 5-6
Google Nest + Yabe '222		1, 13-14
Honeywell Lyric Home Automation		1-20
Honeywell Lyric Home Automation + Arling '239		1-2, 4-8, 10-11, 16-20
Honeywell Lyric Home Automation + Cipollo '336		1, 4-11, 16-20
Honeywell Lyric Home Automation + Ermis '091		1-20
Honeywell Lyric Home Automation + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
Honeywell Lyric Home Automation + Kelly '231		1-20
Honeywell Lyric Home Automation + Madonna '125		1-20
Honeywell Lyric Home Automation + Nakano '391		1-2, 4-15, 17

Reference	Claims Anticipated	Claims Rendered Obvious
Honeywell Lyric Home Automation + Steiner '212		1, 5-6
Honeywell Lyric Home Automation + Yabe '222		1, 13-14
IFTTT		1-20
IFTTT + Arling '239		1-2, 4-8, 10-11, 16-20
IFTTT + Cipollo '336		1, 4-11, 16-20
IFTTT + Ermis '091		1-20
IFTTT + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
IFTTT + Kelly '231		1-20
IFTTT + Madonna '125		1-20
IFTTT + Nakano '391		1-2, 4-15, 17
IFTTT + Steiner '212		1, 5-6
IFTTT + Yabe '222		1, 13-14
Kelly '231	1-20	1-20
Madonna '125	1-20	1-20
Nakano '391	1-2, 4-15, 17	1-20
Samsung SmartThings		1-20
Samsung SmartThings + Arling '239		1-2, 4-8, 10-11, 16-20
Samsung SmartThings + Cipollo '336		1, 4-11, 16-20

<b>Reference</b>	<b>Claims Anticipated</b>	<b>Claims Rendered Obvious</b>
Samsung SmartThings + Ermis '091		1-20
Samsung SmartThings + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
Samsung SmartThings + Kelly '231		1-20
Samsung SmartThings + Madonna '125		1-20
Samsung SmartThings + Nakano '391		1-2, 4-15, 17
Samsung SmartThings + Steiner '212		1, 5-6
Samsung SmartThings + Yabe '222		1, 13-14
Savant		1-20
Savant + Arling '239		1-2, 4-8, 10-11, 16-20
Savant + Kelly '231		1-20
Savant + Madonna '125		1-20
Savant + Nakano '391		1-2, 4-15, 17
Savant + Yabe '222		1, 13-14
Savant + Cipollo '336		1, 4-11, 16-20
Savant + Ermis '091		1-20

<b>Reference</b>	<b>Claims Anticipated</b>	<b>Claims Rendered Obvious</b>
Savant + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
Savant + Steiner '221		1, 5-6
Simplify My Home		1-20
Simplify My Home + Arling '239		1-2, 4-8, 10-11, 16-20
Simplify My Home + Cipollo '336		1, 4-11, 16-20
Simplify My Home + Ermis '091		1-20
Simplify My Home + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
Simplify My Home + Kelly '231		1-20
Simplify My Home + Madonna '125		1-20
Simplify My Home + Nakano '391		1-2, 4-15, 17
Simplify My Home + Steiner '212		1, 5-6
Simplify My Home + Yabe '222		1, 13-14
Steiner '212	1, 5-6	1-20
Steiner '212 + Ehsani '560		1, 3, 5-6
Steiner '212 + Ermis '091		1-20
Steiner '212 + Madonna '125		1-20
Steiner '212 + Yabe '222		1, 5-6, 8, 10, 13-14
WeMo		1-20
WeMo + Arling '239		1-2, 4-8, 10-11, 16-20

Reference	Claims Anticipated	Claims Rendered Obvious
WeMo + Cipollo '336		1, 4-11, 16-20
WeMo + Ermis '091		1-20
WeMo + Feldstein '203		1-2, 4-6, 8-9, 12-14, 17-20
WeMo + Kelly '231		1-20
WeMo + Madonna '125		1-20
WeMo + Nakano '391		1-2, 4-15, 17
WeMo + Steiner '212		1, 5-6
Amazon Echo 1st Generation	1-20 (only to the same extent as KAIFI contends the Amazon Echo 1st Generation practices the claims of the '518 Patent. Nothing herein should be construed as an admission of infringement)	

The claims of the '518 patent are entitled to the following priority dates:

- Claims 1-20: November 3, 2015.

As noted in the chart above, the prior art renders all claims of the '518 Patent obvious. The following motivation to combine rationales apply.

In addition, to the extent that one of the anticipation or obviousness grounds listed above is found to be missing an element, it would have been obvious to further combine the prior art as follows:

For example, to the extent one of the prior art systems is found not to disclose multiple machines, it would have been obvious to expand the number of machines controlled by the system

from a single machine to multiple machines based on the teachings of the other prior art (*e.g.*, Madonna '125, Cipollo '336, Steiner '212, Feldstein '203, Ermis '091). The expansion of a system from controlling one machine to multiple machines would require nothing more than the simple addition of one or more machines, and adjustments to the software of the device to control the machines to process data from and send data to multiple machines.

To the extent one of the centralized control devices of the prior art is found not to disclose a particular claim element required by the '518 Patent's claimed relation server, it would have been obvious to substitute that centralized controller with one from another prior art reference, as that would be nothing more than a simple substitution.

To the extent the prior art is found not to disclose a particular claim element required by the '518 Patent's task schedule process parameter, it would have been obvious to modify the prior art to include a task schedule process parameter defining the sequence of tasks to be performed based on the teaching of the other prior art (*e.g.*, Madonna '125, Cipollo '336, Steiner '212, Feldstein '203, Yabe '222, Ermis '091). The addition of a task schedule process parameter defining the sequence of tasks to be performed would require nothing more than, for example, the simple addition of a software-based timer and code causing the system to trigger processes at the expiration of the timer as opposed to immediately.

To the extent the prior art is found not to disclose any of the following parameters or sub-parameters, it would have been obvious to modify the prior art to include such parameters or sub-parameters based on the teachings of the other prior art (*e.g.*, Madonna '125, Cipollo '336, Steiner '212, Feldstein '203, Yabe '222, Ehsani '560, Ermis '091):

- Group parameter;
- Group identity parameter;

- Task description parameter;
- Status parameter;
- Current operation status sub-parameter;
- Current availability sub-parameter;
- Current process sub-parameter;
- Scheduled termination time of current process sub-parameter;
- Current execution function sub-parameter;
- Scheduled termination time of currently executed function sub-parameter;
- Capability parameter;
- Title of process sub-parameter;
- Input parameter sub-parameter;
- Output parameter sub-parameter;
- Process processing time sub-parameter;
- Process processing condition sub-parameter;
- Function sub-parameter;
- User identity parameter;
- Group identity parameter; and
- Operating system parameter.

For each of these parameters or sub-parameters, the '518 Patent either (1) claims the parameter corresponds to certain information or (2) does not claim any functionality or use of the parameter at all. Accordingly, to add any of these parameters to any prior art system from which they were missing would require, at most, nothing more than configuring the system's computer-based centralized controller to store the information corresponding to the parameter. Storing

information is nothing more than generic computer functionality and would have been obvious to a POSITA.

As another example, it would have been obvious to combine any of the Savant Ecosystem, Cipollo '336, and Madonna '125 such that the combined teachings of the references render the asserted claims obvious. The references all concern the same subject matter and were applied for by or produced by Savant Systems Inc., and thus there is an implied suggestion to view the references together as a unified whole.

As another example, it would have been obvious to combine any of the Crestron System, Feldstein '230, and Feldstein '082 such that the combined teachings of the references render the asserted claims obvious. The references all concern the same subject matter and were applied for by or produced by Crestron Electronics Inc., and thus there is an implied suggestion to view the references together as a unified whole.

As another example, it would have been obvious to combine any of Samsung SmartThings, Imes '532, Kim '242, Kim '571, and Shin '704 such that the combined teachings of the references render the asserted claims obvious. The references all concern the same subject matter and were applied for by or produced by Samsung Electronics Co Ltd., and thus there is an implied suggestion to view the references together as a unified whole.

As another example, it would have been obvious to combine any of WeMo and Kelly '231 such that the combined teachings of the references render the asserted claims obvious. The references all concern the same subject matter and were applied for by or produced by Belkin International Inc., and thus there is an implied suggestion to view the references together as a unified whole. It would have further been obvious to combine IFTTT with either WeMo or Kelly '231 because the IFTTT and WeMo were integrated together during the relevant time period. *See*

<https://web.archive.org/web/20140125122405/http://www.belkin.com/us/Products/home-automation/c/wemo-home-automation/> (“WeMo also works with IFTTT, connecting your home electronics to a whole world of online apps.”)

As another example, it would have been obvious to combine any of Google Nest and Matsuoka ’230 such that the combined teachings of the references render the asserted claims obvious. The references all concern the same subject matter and were applied for by or produced by Google LLC, and thus there is an implied suggestion to view the references together as a unified whole.

To the extent the prior art is found not to disclose a first machine for of the multiple machines forwarding 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 the selected machine includes the first machine as claimed in the ’518 Patent’s claim 2, it would have been obvious to modify the prior art to include such functionality based on the other prior art (*e.g.*, Madonna ’125, Feldstein ’203, Ermis ’091). Each of the prior art references relate to systems and methods whereby a centralized controller controls devices based on user commands, including by sending data to and receiving data from the devices. In such a system, it would have been a trivial modification to have the data sent by a device to the centralized controller include a command from a user and to have data sent by the centralized controller to the device that forwarded the command that controls the device to execute the command.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *multiple machines*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna ’125, Arling ’239, Cipollo ’336, Steiner ’212, Feldstein ’212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home,

WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Yabe '222, Bamberger '627, Christensen '764, Ehsani '560, or Nakano '391 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, the claimed multiple machines from any of the references in List B) according to known methods (*i.e.*, adding multiple machines to systems and methods for controlling machines) to achieve a predictable result (*i.e.*, control of multiple machines). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement the *multiple machines* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the multiple machines from any of the references in List B with any of the other multiple machines in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Cipollo '336, Steiner '212, Feldstein '212, Arling '239, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Nakano '391, Cipollo '336, Steiner '212, Feldstein

'203, Sasaki '562, Yabe '222, Bamberger '627, Christensen '764, Ehsani '560, Nakano '391, or Arling '239 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, the claimed relation server for storing a relation profile including a task schedule parameter from any of the references in List B) according to known methods (*i.e.*, adding a server for storing relation profiles for controlling machines multiple to systems and methods for controlling machines) to achieve a predictable result (*i.e.*, control of multiple machines via a server). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the *a relation servers 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* from any of the references in List B with any of the other relation servers in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231,

or EnergyHub (collectively, and for purposes of this paragraph only, “List A”) disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna ’125, Arling ’239, Nakano ’391, Cipollo ’336, Steiner ’212, Feldstein ’203, Sasaki ’562, Yabe ’222, Bamberger ’627, Christensen ’764, Ehsani ’560, or Nakano ’391 (collectively, and for purposes of this paragraph only, “List B”). Such a combination would be nothing more than combining prior art elements (*i.e.*, the claimed relation server for storing a relation profile including a task schedule parameter from any of the references in List B) according to known methods (*i.e.*, adding a server for storing relation profiles for controlling machines multiple to systems and methods for controlling machines) to achieve a predictable result (*i.e.*, control of multiple machines via a server). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the *a relation servers 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* from any of the references in List B with any of the other relation servers in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *wherein the task processing schedule parameter configures a start time of at least one process of the multiple processes*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna ’125, Arling ’239, Nakano ’391, Cipollo ’336, Steiner

'212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Yabe '222, Bamberger '627, Christensen '764, Ehsani '560, Nakano '391, or Arling '239 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, the claimed task processing schedule parameter from any of the references in List B) according to known methods (*i.e.*, adding a scheduling parameter for controlling machines to systems and methods for controlling machines) to achieve a predictable result (*i.e.*, control of multiple machines based on a scheduling parameter). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *wherein the task processing schedule parameter configures a start time of at least one process of the multiple processes* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the task processing schedule parameters from any of the references in List B with any of the other task processing schedule parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *wherein the multiple machines includes at least one of a home appliance, a smart phone or a search engine*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for

purposes of this paragraph only, “List A”) disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna ’125, Cipollo ’336, Steiner ’212, Feldstein ’203, Sasaki ’562, Yabe ’222, Bamberger ’627, Christensen ’764, Ehsani ’560, Nakano ’391, or Arling ’239 (collectively, and for purposes of this paragraph only, “List B”). Such a combination would be nothing more than combining prior art elements (*i.e.*, the claimed home appliance, smart phone, or search engine from any of the references in List B) according to known methods (*i.e.*, adding a machine consisting of a home appliance, smart phone, or search engine to systems and methods for controlling machines) to achieve a predictable result (*i.e.*, control of a machine consisting of a home appliance, a smart phone, or a search engine). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *wherein the multiple machines includes at least one of a home appliance, a smart phone or a search engine* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the home appliances, smart phones, or search engines from any of the references in List B with any of the other home appliances, smart phones, or search engines in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *a first machine of the multiple machines forwards a command received from the user to the relation server*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna ’125, Arling ’239, Cipollo ’336, Steiner ’212, Feldstein ’212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly ’231, or EnergyHub (collectively, and for purposes of this paragraph only, “List A”) disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna ’125, Arling

'239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Ermis '091, or Crestron (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combing prior art elements (*i.e.*, a machine that forwards a user command to a relation server from any of the references in List B) according to known methods (*i.e.*, adding forwarding capabilities to a machine in a systems or method for controlling machines) to achieve a predictable result (*i.e.*, forwarding of information from a machine to a server). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *a first machine of the multiple machines forwards a command received from the user to the relation server* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the machines for forwarding user commands from any of the references in List B with any of the other machines for forwarding user commands in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the relation server controls the selected machines for performing the multiple processes according to the command*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Ermis '091, or Crestron (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combing prior art elements (*i.e.*, a relation server for controlling

selected machines according to a forwarded command from any of the references in List B) according to known methods (*i.e.*, configuring a server to control machines based on a received command) to achieve a predictable result (*i.e.*, controlling machines based on a forwarded command). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the relation server controls the selected machines for performing the multiple processes according to the command* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the relation servers from any of the references in List B with any of the other relation servers in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the selected machine includes the first machine*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Ermis '091, or Crestron (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a machine that can both forward user commands and be controlled by a relation server from any of the references in List B) according to known methods (*i.e.*, adding a machine capable of being controlled to a system or method for controlling machines) to achieve a predictable result (*i.e.*, control of a machine that is also capable of forwarding commands). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the*

*selected machine includes the first machine* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the first machines from any of the references in List B with any of the other first machines in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the command includes a reservation or a payment*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Sasaki '562, Ehsani '560, Crestron, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, commands for a reservation or payment from any of the references in List B) according to known methods (*i.e.*, adding a particular command to a system or method for controlling machines based on user commands) to achieve a predictable result (*i.e.*, a system or method capable of receiving a command that includes a reservation or payment). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the command includes a reservation or a payment* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the commands from any of the references in List B with any of the other commands in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the relation profile includes a capability set parameter that corresponds to information about capabilities required for performing the command*, it would have been obvious to combine them with other

references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Ehsani '560, Feldstein '203, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation profile with a parameter corresponding to capabilities required for performing commands from any of the references in List B) according to known methods (*i.e.*, adding a parameter regarding capabilities needed to perform a command to a system or method for controlling machines based on user commands) to achieve a predictable result (*i.e.*, a system or method for controlling machines to perform commands that includes a parameter corresponding to the capabilities required to perform the command). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the relation profile includes a capability set parameter that corresponds to information about capabilities required for performing the command* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the capability set parameters from any of the references in List B with any of the other capability set parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the relation profile includes a group parameter that corresponds to identities of machines required for performing the command*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212,

Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Christensen '764, Ehsani '560, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation profile with a parameter corresponding to identities of machines required for performing commands from any of the references in List B) according to known methods (*i.e.*, adding a parameter regarding identities of machines needed to perform a command to a system or method for controlling machines based on user commands) to achieve a predictable result (*i.e.*, a system or method for controlling machines to perform commands that includes a parameter corresponding to the identities of the machines required to perform the command). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the relation profile includes a group parameter that corresponds to identities of machines required for performing the command* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the group parameters from any of the references in List B with any of the other group parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the relation profile includes a group identity parameter that corresponds to an identity of a group consisting of machines required for performing the command*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home

Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Christensen '764, Ehsani '560, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation profile with a parameter corresponding to a group of machines required for performing commands from any of the references in List B) according to known methods (*i.e.*, adding a parameter regarding the identity of a group of machines needed to perform a command to a system or method for controlling machines based on user commands) to achieve a predictable result (*i.e.*, a system or method for controlling machines to perform commands that includes a parameter corresponding to a group of machines required to perform the command). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the relation profile includes a group identity parameter that corresponds to an identity of a group consisting of machines required for performing the command* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the group identity parameters from any of the references in List B with any of the other group identity parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the relation profile includes a task description parameter that corresponds to information related to the command, and the information is saved in a form of text*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home

Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Ehsani '560, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation profile with a parameter corresponding to information related to a task and stored in text from any of the references in List B) according to known methods (*i.e.*, adding a parameter regarding information related to the command to a system or method for controlling machines based on user commands) to achieve a predictable result (*i.e.*, a system or method for controlling machines to perform commands that includes a parameter corresponding to information related to the command stored in text). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the relation profile includes a task description parameter that corresponds to information related to the command, and the information is saved in a form of text* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the task description parameters from any of the references in List B with any of the other task description parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home

Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Yabe '222, Bamberger '627, Ermis '091, or Crestron (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, sub-parameters corresponding to a start condition of a process or an allocated machine identity of a process from any of the references in List B) according to known methods (*i.e.*, adding sub-parameters corresponding to a start condition of a process or an allocated machine identity of a process to a system or method for controlling machines to perform processes) to achieve a predictable result (*i.e.*, a system or method for controlling machines to perform processes that includes sub-parameters corresponding to a start condition of a process or an allocated machine identity of a process). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the sub-parameters from any of the references in List B with any of the other sub-parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the relation server stores multiple machine profiles of the multiple machines*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell

Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Nakano '391, Cipollo '336, Feldstein '203, Sasaki '562, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation server that stores multiple machine profiles from any of the references in List B) according to known methods (*i.e.*, adding storage of multiple machine profiles to a centralized controller of machines to a system or method for controlling machines via a centralized controller) to achieve a predictable result (*i.e.*, a system or method for controlling machines via a centralized controller that machine profiles of the machines stored on the centralized controller). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the relation server stores multiple machine profiles of the multiple machines* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the machine profiles from any of the references in List B with any of the other machine profiles in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125,

Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Nakano '391, Cipollo '336, Steiner '212, Sasaki '562, Yabe '222, Bamberger '627, Christensen '764, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a status parameter including any one of the listed sub-parameters from any of the references in List B) according to known methods (*i.e.*, adding a status parameter to a profile of a machine to a system or method for controlling machines) to achieve a predictable result (*i.e.*, a system or method for controlling machines including profiles with a status parameter of a machine). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the status parameters from any of the references in List B with any of the other status parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Sasaki '562, Christensen '764, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a capability parameter including any one of the listed sub-parameters from any of the references in List B) according to known methods (*i.e.*, adding a capability parameter to a profile of a machine to a system or method for controlling machines) to achieve a predictable result (*i.e.*, a system or method for controlling machines including profiles with a capability parameter of a machine). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the capability parameters from any of the references in List B with any of the other capability parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *at least one machine profile of the multiple machine profiles includes a machine identity parameter*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Christensen '764, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a machine identity parameter from any of the references in List B) according to known methods (*i.e.*, adding a parameter identifying a machine to a profile of a machine to a system or method for controlling machines) to achieve a predictable result (*i.e.*, a system or method for controlling machines including profiles with a parameter regarding the identity of a machine). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *at least one machine profile of the multiple machine profiles includes a machine identity parameter* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the machine identity parameters from any of the references in List B with any of the other machine identity parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Yabe '222, Christensen '764, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a user identity parameter from any of the references in List B) according to known methods (*i.e.*, adding a parameter identifying a user capable of using a machine to a profile of a machine to a system or method for controlling machines) to achieve a predictable result (*i.e.*, a system or method for controlling machines including profiles with a parameter corresponding to users capable of using a machine). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the user identity parameters from any of the references in List B with any of the other user identity parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Yabe '222, Christensen '764, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a group identity parameter from any of the references in List B) according to known methods (*i.e.*, adding a parameter identifying a user group capable of using a machine to a profile of a machine to a system or method for controlling machines) to achieve a predictable result (*i.e.*, a system or method for controlling machines including profiles with a parameter corresponding to a user group capable of using a machine). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the user identity parameters from any of the references in List B with any of the other user identity parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *at least one machine profile of the multiple machine profiles includes an operating system parameter, and the operating system parameter corresponds to an identity of a user group being capable of using a*

*machine corresponding to the at least one machine profile*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Nakano '391, Cipollo '336, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, an operating system parameter from any of the references in List B) according to known methods (*i.e.*, adding a parameter identifying a type of an operating system used by a machine to a profile of a machine to a system or method for controlling machines) to achieve a predictable result (*i.e.*, a system or method for controlling machines including profiles with a parameter corresponding to an operating system used by a machine). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *at least one machine profile of the multiple machine profiles includes an operating system parameter, and the operating system parameter corresponds to an identity of a user group being capable of using a machine corresponding to the at least one machine profile* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the operating system parameters from any of the references in List B with any of the other operating system parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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*

*corresponding to the at least one machine profile*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Sasaki '562, Christensen '764, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, an interface parameter from any of the references in List B) according to known methods (*i.e.*, adding a parameter identifying a an interface protocol between a centralized controller and a machine to a profile of a machine to a system or method for controlling machines via a centralized controller) to achieve a predictable result (*i.e.*, a system or method for controlling machines via a centralized controller including profiles with a parameter corresponding to an interface protocol between a machine and the centralized controller). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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 corresponding to the at least one machine profile* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the interface parameters from any of the references in List B with any of the other interface parameters in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the relation server saves information related to grouping the multiple machines*, it would have been obvious

to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Yabe '222, Christensen '764, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation server that saves information related to grouping the multiple machines from any of the references in List B) according to known methods (*i.e.*, configuring a centralized controller of machines to store information related to grouping the machines in a system or method for controlling machines via a centralized controller) to achieve a predictable result (*i.e.*, a system or method for controlling machines via a centralized controller storing information related to grouping the machines in the centralized controller). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the relation server saves information related to grouping the multiple machines* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the relation servers that save information related to grouping the multiple machines from any of the references in List B with any of the other relation servers in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *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, and a capability parameter of the at least one machine*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Yabe '222, Christensen '764, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation server that generates a parameter regarding capabilities required to perform a command, and from such a parameter generates a parameter for scheduling processes to perform the command from any of the references in List B) according to known methods (*i.e.*, configuring a centralized controller that controls machines to perform commands to generate a parameter regarding capabilities required to perform a command, and from such a parameter generate a parameter for scheduling processes to perform the command) to achieve a predictable result (*i.e.*, a system or method for controlling machines to perform commands via a centralized controller ). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *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, and a capability parameter of the at least one machine* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of the relation servers that generates the capability set and task

scheduling parameter from any of the references in List B with any of the other relation servers in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the intervention includes selecting some processes of the multiple processes*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Ehsani '560, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation server that receives a user intervention that includes selecting processes from any of the references in List B) according to known methods (*i.e.*, configuring a centralized controller that receives an intervention from a user to receive an intervention that includes selecting some processes) to achieve a predictable result (*i.e.*, a system or method for controlling machines to perform commands via a centralized controller wherein the centralized controller can receive interventions that include selecting some processes). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the intervention includes selecting some processes of the multiple processes* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of interventions from any of the references in List B with any of the other interventions in List B.

Additionally, for any of the references in § III.A, *supra*, that do not disclose *the intervention includes approving the multiple processes*, it would have been obvious to combine them with other references that do. For example, to the extent any of Madonna '125, Arling '239, Cipollo '336, Steiner '212, Feldstein '212, Crestron, Ecobee, Google Nest, Honeywell Lyric Home Automation, IFTTT, Simplify My Home, WeMo, Control4, Samsung SmartThings, Kelly '231, or EnergyHub (collectively, and for purposes of this paragraph only, "List A") disclose a system that otherwise satisfies the claim elements except for this one, then it would have been obvious to combine these references with Madonna '125, Arling '239, Nakano '391, Cipollo '336, Steiner '212, Feldstein '203, Sasaki '562, Ehsani '560, or Ermis '091 (collectively, and for purposes of this paragraph only, "List B"). Such a combination would be nothing more than combining prior art elements (*i.e.*, a relation server that receives a user intervention that includes approving multiple processes from any of the references in List B) according to known methods (*i.e.*, configuring a centralized controller that receives an intervention from a user to receive an intervention that includes approving multiple processes) to achieve a predictable result (*i.e.*, a system or method for controlling machines to perform commands via a centralized controller wherein the centralized controller can receive interventions that include approving processes). Such a combination would be nothing more than using a known system from List A in an arrangement allowing them to implement *the intervention includes approving the multiple processes* functionality as set forth in List B. In addition, it would have been obvious to do a simple substitution of any of interventions from any of the references in List B with any of the other interventions in List B.

**C. Disclosures Pursuant to P.R. 3-3(c)**

The claim charts in the Appendices identify where in each of the charted prior art references the limitations of the asserted claims of the '518 Patent are found.

Defendants have endeavored to cite to the most relevant portions of the identified prior art. However, other portions of the identified prior art may additionally disclose, either expressly or inherently, one or more elements or limitations of the asserted claims. In an effort to focus the issues, Defendants identify only exemplary portions of the identified prior art. To the extent it is found a charted reference does not expressly disclose certain claim limitations, such limitations are inherent. Defendants reserve the right to rely on uncited portions of the identified prior art to establish the invalidity of the asserted claims. Moreover, Defendants reserve the right to rely on uncited portions of the identified prior art, rely on other references (irrespective of whether such references themselves qualify as prior art) to show the state of the art, and/or to rely on expert or fact testimony to provide context to, or aid in, understanding the cited portions of the identified prior art. Where Defendants cite to a particular drawing or figure in the attached claim charts, the citation encompasses the description of the drawing or figure, as well as any text associated with the drawing or figure. Similarly, where Defendants cite to particular text concerning a drawing or figure, the citation encompasses that drawing or figure as well.

Relatedly, it is often the case that certain portions of patent disclosures build upon other disclosures – even if they are referred to as a separate or alternative embodiment. Thus, Defendants’ citations to structures or functions incorporate by reference all disclosures to related structures or functions, including any additional detail provided as to the operation or design of those structures or functions. Further, citations in each dependent claim include citations to each claim from which it directly or indirectly depends. And citations as to any recited limitation, step, or component in the claims apply wherever each such limitation, step, or component is repeatedly recited elsewhere in the claim.

**D. Disclosures Pursuant to P.R. 3-3(d)**

Pursuant to Patent Local Rule 3-3(d), Defendants hereby identify grounds of invalidity based on (1) lack of written description and enablement under 35 U.S.C. § 112, ¶ 1; and (2) indefiniteness under 35 U.S.C. § 112, ¶ 2. These Initial Invalidity Contentions shall not be construed as an admission that any claim construction advanced by Defendants in this case is in any way inconsistent, flawed, or erroneous. Nor should these contentions prevent Defendants from advancing claim construction and/or noninfringement positions in lieu of, or in addition to, invalidity positions. Further, these Invalidity Contentions shall not be construed as an admission of or acquiescence to KAIFI's purported construction of the claim language or of other positions advanced by KAIFI during the course of this litigation. Defendants' Invalidity Contentions may depend on the Court's claim construction, as well as KAIFI's asserted claim scope.

Below, Defendants identify the issues under 35 U.S.C. § 112 of which they are presently aware. Pursuant to the applicable provisions of the Docket Control Order and Local Rules, Defendants reserve the right to supplement or amend their contentions after the Court's *Markman* ruling or if KAIFI amends or alters its infringement contentions in any way.

**1. Written Description and Enablement**

To satisfy the written description requirement of 35 U.S.C. § 112, ¶ 1, the specification of a patent must “clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed” and “had possession of the claimed subject matter as of the filing date.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). In particular, an adequate written description must “demonstrate that the patentee possessed the full scope of the invention recited in [the] claim.” *LizardTech*, 424 F.3d at 1345. To satisfy the enablement requirement, “the specification of a patent must teach those skilled in the art how to make and use

the full scope of the claimed invention without undue experimentation.” *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (quotations omitted); *see also Amgen v. Sanofi*, 598 U.S. 594, 610 (2023) (“If a patent claims an entire class of processes, machines, manufactures, or compositions of matter, the patent’s specification must enable a person skilled in the art to make and use the entire class. In other words, the specification must enable the full scope of the invention as defined by its claims. The more one claims, the more one must enable.”).

The specification of the ’518 Patent fail to meet the written description and enablement requirements of 35 U.S.C. § 112 ¶ 1 because it fails to disclose, enable or teach—or fails to disclose, enable or teach the full scope of—the following claim phrases:

***“task processing schedule parameter” (Claims 1, 8, 18).<sup>1</sup>***

The ’518 Patent does not provide adequate written description or enable the “task processing schedule parameter” recited in claims 1, 8, and 18. As an initial matter, the ’518 Patent specification provides relatively little discussion of the “task processing schedule parameter”:

- ’518 Patent at 2:30-31: “The task processing schedule parameter may include sub-parameters.”
- *Id.* at 7:46-50: “The task processing schedule parameter may include relations (e.g. a processing sequence) between multiple processes . . . and sub-parameters related to the respective processes.”
- *Id.* at 7:51-58: “According to an embodiment, the sub-parameters of the task processing schedule parameter may include the process start time of each process, the start condition(s) of each process, the machine IDs of machines allocated, the functions used, the start time of each of the functions, the predicted termination time of the process, interface parameters, the termination condition(s) of the process, etc.”

<sup>1</sup> In these headings, Defendants identify the claim(s) that contain the particular term(s) being discussed. It should be understood that all claims that depend from the identified claim(s) are also invalid on the same grounds and for the same reasons, as the dependent claims do not provide any additional written description or enabling disclosure.

These bare-bones disclosures of the '518 Patent specification, indicating what a task processing schedule parameter “may include” do not demonstrate possession of the full scope of the “task processing schedule parameter” or enable the full scope of generating and storing a “task processing schedule parameter” without undue experimentation. The patent disclosure provides no information about how a “task processing schedule parameter” is generated, defined, or measured. Further, the '518 Patent provides essentially no information regarding what the “task processing schedule parameter” includes, much less disclose all possible “task processing schedule parameters,” all possible sub-parameters thereof, or how the same would be generated. To the contrary, the '518 Patent describes the “task processing schedule parameter” only with reference to what sub-parameters it may include, while similarly failing to describe what those sub-parameters represent, measure, or define, or how the “task processing schedule parameter” may include such sub-parameters.

The only other disclosures describing features of the “task processing schedule parameter” are found in the claims of the '518 Patent. However, none of the claims of the '518 Patent were included in the original application that led to the '518 Patent. Accordingly, the claims of the '518 Patent are not part of the written description and cannot be used to demonstrate written description support for the “task processing schedule parameter.” *See, e.g., Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1329 (Fed. Cir. 2000) (“the amended claims define the invention, . . . the support for the invention must be found in the specification as filed, and . . . the amended claims could not be used to provide that support”).

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures,

information, and instrumentalities that are not described or enabled by the '518 Patent's specification disclosure.

Thus, claims 1, 8, and 18 are invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“selected machines” (Claims 1, 2).***

The '518 Patent does not provide adequate written description or enable the “selected machines” recited in claims 1 and 2. The '518 Patent specification does not describe “select[ing]” any set of “machine[s]” that could be understood as the claimed “selected machines.” The '518 Patent's only references to a “selection” of machines relate to “selection of the user” of a group of machines to be re-grouped. *See* '518 Patent at 2:46-59. This selection of machines for grouping does not describe a group of “selected machines . . . to perform the multiple processes” as claimed in claims 1 and 2. The '518 Patent specification does not describe or enable the “select[ion] of any group of “ machines” “to perform the multiple processes.”

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI's Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent's specification disclosure.

Thus, claims 1 and 2 are invalid for lack of proper written description and enablement.

***“intervention” / “intervention by a user in the relation profile” (Claims 1, 19, 20).***

The '518 Patent does not provide adequate written description or enable the “intervention” / “intervention by a user in the relation profile” recited in claims 1, 19, and 20. As an initial matter, the '518 Patent specification provides only passing reference to any “intervention[s]”:

- '518 Patent at 2:41-43: “[A]n intervention of a user” may be “based on processes include in the relation profile.”
- *id.* at 2:44-45, 6:26-28: “The intervention of the user may include an approval or a selection of the user related to an execution of the process.”
- *Id.* at 6:32-36: “The said user intervention step may be performed at various times.”

The '518 Patent specification does not demonstrate possession of the full scope of the claimed “intervention by a user in the relation profile” or enable the performance of such an “intervention” without undue experimentation. None of the '518 Patent’s disclosures regarding “intervention[s] by a user” describe how the intervention is performed or how any intervention are is “in the relation profile” as is claimed in claims 1, 19, and 20. The specification of the '518 Patent fail to describe the full scope of “intervention,” and the only practical examples describe that an intervention “may include an approval or a selection,” which suggests that additional interventions, while undisclosed, also could exist.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent’s specification disclosure.

Thus, claims 1, 19, and 20 are invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written

description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“processes” (Claims 1, 2, 8, 19, 20).***

The '518 Patent does not provide adequate written description or enable the “processes” recited in claims 1, 2, 8, 19, and 20.

First, the '518 Patent does not demonstrate that the patentee possessed the full scope of the claimed “processes.” Instead, the '518 Patent describes only a limited set of examples of “processes.” Particularly, the only “processes” disclosed in the '518 Patent are “cleaning,” “doing the dishes,” and “doing the laundry.” '518 Patent at 8:3-6.

Second, the '518 Patent would not enable one skilled in the art to make use of the claimed “processes.” As explained above, nowhere does the '518 Patent teach one skilled in the how to make, use, or define any “processes” that may be “perform[ed]” by “selected machines” as claimed in the '518 Patent.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI's Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent's specification disclosure.

Thus, claims 1, 2, 8, 19 and 20 are invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“the selected machine” (Claim 2).***

The '518 Patent does not provide adequate written description or enable the “selected machine” recited in claim 2. The '518 Patent does not describe “select[ing]” any one “machine” that could be understood as the claimed “selected machine.” As discussed above, the '518 Patent’s only references to a “selection” of machines relate to “selection of the user” of a group of machines to be regrouped. *See* '518 Patent at 2:46-59. This selection of a plural group of machines provides no description regarding selection of a singular “selected machine” as claimed in claim 2. And it would not enable one skilled to determine how or on what basis to “select[.]” the “selected machine” without undue experimentation.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent’s specification disclosure.

Thus, claim 2 is invalid for lack of proper written description and enablement.

***“command” / “forwards a command” (Claims 2, 3, 4, 5, 6, 7, 18).***

The '518 Patent does not provide adequate written description or enable the full scope of a “command” / “forward[ing] a command” as recited in claims 2, 3, 4, 5, 6, 7, and 18. The '518 Patent’s disclosures related to “command[s]” disclose things that may be done to a command, but do not describe or enable the use or generation of a “command.” Particularly, the '518 Patent discloses:

- '518 Patent at 1:27-29: “[E]xternally receiv[ing] a command.” *See also id.* at 9:4-8.

- *Id.* at 1:49: “[E]xecut[ing] externally received commands.” *See also id.* at 8:9, 8:30, 9:17, 11:22-2.
- *Id.* at 1:55: “[A]nalyzing the command.” *See also id.* at 2:57, 5:57, 6:15, 6:53, 9:12-13.
- *Id.* at 2:39-40: “[C]ompleting the execution of the command.”
- *Id.* at 10:31: “[T]ransmit[ing] a command.”

The ’518 Patent specification does not demonstrate possession or enablement of the full scope of the claimed “command.” None of these disclosures regarding what may be done with or to a command provide any description demonstrating that the patentee possessed the full scope of the “command” itself. No information is provided with respect to how such commands are generated, what their contents are, or what structure(s) generate them. Indeed, the only description of a “command” in the ’518 Patent is a single example of a “movie recommendation command.” *Id.* at 9:4-5. Further, the ’518 Patent provides no description of how a command is “forward[ed]” or where the command is “forward[ed]” to or from, and would not enable a person skilled in the art to perform the claimed “forward[ing]” of any “command” without undue experimentation.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the ’518 Patent’s specification disclosure.

Thus, claims 2, 3, 4, 5, 6, 7, and 18 are invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“capability set parameter” (Claim 4).***

The '518 Patent does not provide adequate written description for or enable the “capability set parameter” recited in claim 4. The '518 Patent specification’s discussion of the “capability set parameter” is extremely limited. It is described in a single sentence, which simply states:

“The capability set parameter may include information about capability parameters, which are required for relevant task, and machines may be grouped based on the capability set parameters.” '518 Patent at 7:32-36.

The '518 Patent specification’s single statement about what a capability set parameter “may include” does not demonstrate possession of the full scope of the “capability set parameter” or enable the generation of a “capability set parameter” without undue experimentation. The patent disclosure provides no information about how a “capability set parameter” is generated, defined, or measured. Further, the '518 Patent provides essentially no information regarding what the “capability set parameter” represents, measures, or defines. To the contrary, the '518 Patent describes the “capability set parameter” only with reference to what sub-parameters it may include, while similarly failing to describe what those sub-parameters represent, measure, or define, or how the “capability set parameter” may include such sub-parameters.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent’s specification disclosure.

Thus, claim 4 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“group parameter” (Claim 5).***

The '518 Patent does not provide adequate written description for or enable the “group parameter” recited in claim 5. The '518 Patent’s specification does not provide any description regarding the “group parameter;” the term does not appear anywhere in the '518 Patent outside of the claims.

The '518 Patent does disclose a “group ID parameter.” However, the recitation of “group parameter” in claim 5 makes clear that it is separate from the “group ID parameter.” The '518 Patent discloses that the group ID parameter “denotes a unique identifier allocated to a user group . . . that is capable of utilizing the machines.” '518 Patent at 5:24-27. In contrast, claim 5 recites that the “group parameter” “corresponds to identity of machines,” not the identity of a user group. *Id.* at cl. 5. Accordingly, the '518 Patent specification does not describe, teach, explain, suggest, or even give an example of what a “group parameter” is.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent’s specification disclosure.

Thus, claim 5 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“group identity parameter” (Claims 6).***

The '518 Patent does not provide adequate written description for or enable the “group identity parameter” recited in claims 6. The '518 Patent’s specification does not provide any description regarding the “group identity parameter;” the term does not appear anywhere in the '518 Patent outside of the claims. The '518 Patent does disclose a “group ID parameter.” However, the recitation of “group identity parameter” in claim 6 makes clear that it is distinct from the “group ID parameter.” The '518 Patent discloses that the group ID parameter “denotes a unique identifier allocated to a user group . . . that is capable of utilizing the machines.” '518 Patent at 5:24-27. In contrast, claim 6 recites that the “group identity parameter” “corresponds to an identity of a group consisting of machines,” not the identity of a user group. *Id.* at cl. 6. Accordingly, the '518 Patent specification does not describe, teach, explain, suggest, or even give an example of the “group identity parameter” claimed in claim 6.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent’s specification disclosure.

Thus, claim 6 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“task description parameter” (Claim 7).***

The '518 Patent does not provide adequate written description for or enable the “task description parameter” recited in claim 7.

As an initial matter, the '518 Patent specification provides very little discussion of the “task description parameter”:

- '518 Patent at 2:26-29: “The relation profile may include at least one of a capability set parameter, grouped machine parameters, a work group ID parameter, a task description parameter, and a task processing schedule parameter.”
- *Id.* at 7:42-45: “The task description parameter may include various types of additional information related to the relevant task. For example, the task description parameter may include details about the tasks for the relevant task in the form of text.”

The '518 Patent specification does not demonstrate possession of the full scope of the “task description parameter” or enable the generation of a “task description parameter” without undue experimentation. The patent disclosure provides no information about how a “task description parameter” is generated, defined, or measured. Further, the '518 Patent provides essentially no information regarding what the “task description parameter” represents, measures, or defines. To the contrary, the '518 Patent describes the “task description parameter” only with reference to what information it may include—particularly, “details about the tasks for the relevant task”—while similarly failing to describe what those “details” represent, measure, or define, or how the “task description parameter” may include such details.

First, the '518 Patent does not demonstrate that the patentee possessed the full scope of the claimed “task description parameter.” The '518 Patent provides a “relation profile may include . . . a task description parameter,” but does not describe or show possession of the full scope of the included “task description parameter.” '518 Patent at 2:26-27, 7:28-29. The only disclosure describing the “task description parameter” discloses that it “may include various types of

additional information related to the relevant task” such as “details about the tasks for the relevant task in the form of text.” *Id.* at 7:42-45. Such a disclosure describing only information the “task description parameter” may include necessarily does not demonstrate that the patentee possessed the full scope of the claimed “task description parameter,” as it does not disclose what, if any, features or information a “task description parameter” must include, nor does it expressly limit the scope of the term.

Second, the ’518 Patent would not enable one skilled in the art to make use of the claimed “task description parameter.” As explained above, nowhere does the ’518 Patent teach one skilled in the art what a “task description parameter” is in the context of the ’518 Patent, let alone how to make or use the claimed “task description parameter.”

Thus, claim 7 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“machine profile(s)” (Claims 9, 10, 11, 12, 13, 14, 15, 16).***

The ’518 Patent does not provide adequate written description for or enable the “machine profile” as recited in claims 9, 10, 11, 12, 13, 14, 15 and 16.

First, the ’518 Patent does not demonstrate that the patentee possessed the full scope of the claimed “machine profile.” The ’518 Patent provides only a few statements regarding the “machine,” and fails to describe or enable the full scope of this term. For example:

- ’518 Patent at 2:5-9: “A machine profile including information about each of the machines may include a capability parameter and a status parameter, and the machine profile may further include at least one of a machine ID parameter, a user ID parameter, a group ID parameter, a machine operating system parameter, and a machine interface parameter.”

- *Id.* at 4:23-28: The machine profile means data including various types of information related to each machine **101, 102, 105, or 106**. According to an embodiment, the machine profile may include at least one of the parameters of the machine profile presented in the following Table 1. Each of the machine profile parameters may include at least one sub-parameter.
- *Id.* at 5:38-46: “In accordance with an embodiment, the machine profile may be defined and implemented in the form of a schema having a hierarchical structure. That is, the machine profile may be defined and implemented as a data structure having a structure system such as that given in Table 1. In this case, the machine profile may further include a tag, indicating the last portion of each parameter (or machine profile), in the last portion of each parameter (or the last portion of the machine profile).”

These bare-bones statements in the '518 Patent specification about what information may be included in a “machine profile” does not demonstrate possession of the full scope of the “machine profile(s)” or enable the full scope of this term without undue experimentation. It does not disclose *how* machine profile(s) are generated, defined, or measured. To the contrary, the '518 Patent provides non-limiting descriptions of what can be contained or included in a “machine profile(s)—for example the statement that “machine profile means *data including various types of information related to each machine 101, 102, 105, or 106.*” But the '518 Patent does not show possession of all possible types of information related to each machine; nor does it enable a POSITA to generate a machine profile with such a scope.

Thus, claims 9, 10, 11, 12, 13, 14, 15 and 16 are invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“status parameter” (Claims 10, 18).***

The '518 Patent does not provide adequate written description for or enable the “status parameter” as recited in claims 10 and 18.

First, the '518 Patent does not demonstrate that the patentee possessed the full scope of the claimed “status parameter.” The '518 Patent provides only a few statements regarding the “status parameter.” Particularly:

- '518 Patent at 2:5-7: “A machine profile . . . may include . . . a status parameter.”
- *Id.* at 2:17-20: “[F]orming relations between the grouped machines based on the . . . status parameter.”
- *Id.* at 5:56-61: “[G]roup[ing] the machines 101, 102, 105, and 106 based on the . . . status parameters.”
- *Id.* at 8:13-16: “[T]he arrangement corresponding to the . . . status parameter of respective machines 101, 102, 105, and 106 may be taken into consideration.”
- *Id.* at 8:45-52: “[T]he relation server . . . may update the status parameters.”

The '518 Patent specification does not demonstrate possession of the full scope of the “status parameter” or enable the generation of a “status parameter” without undue experimentation. The patent disclosure provides no information about how a “status parameter” is generated, defined, or measured. Further, the '518 Patent provides essentially no information regarding what the “status parameter” represents, measures, or defines. To the contrary, the '518 Patent describes things that may be done based on the status parameter—particularly, “forming relations,” “group[ing] machines,” “tak[ing] [the status parameter] into consideration,” and “update[ing] the status parameter”—but not what the status parameter represents. The '518 Patent’s specification provides only a bare-bones, high-level descriptions for this claimed concept, essentially stating that it exists but without any further explanation or teaching. As such the patent fails to show possession or enable the full scope of “status parameter.”

Thus, claims 10 and 18 are invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written

description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“capability parameter” (Claims 11, 18).***

The '518 Patent does not provide adequate written description for or enable the “capability parameter” recited in claims 11 and 18. The '518 Patent’s disclosures regarding the “capability parameter” disclose what may be done with or to a “capability parameter.” Particularly, the '518 Patent discloses:

- '518 Patent at 1:55-60: a “machine profile . . . may include a capability parameter.”
- *Id.* at 2:5-9: “forming relations between the grouped machines based on the . . . capability parameter.”
- *Id.* at 2:17-30: “grouping . . . machines . . . based on the . . . capability parameters.”
- *Id.* at 8:45-52: “the relation server 104 may fixedly store the capability parameters.”
- *Id.* at 5:7-12: “The sub-parameters of the capability parameter may include the title of a process, which can be processed by each of the machines **201, 202, 204,** and **205**, an input parameter, an output parameter, a process processing time, a process processing condition, and multiple functions related to the executable task (function 1, function 2, function 3, . . . , function n).”

The only disclosure describing the “capability parameter” itself discloses that it “may include sub-parameters related to at least one of a title of an executable process, an input parameter, an output parameter, a process processing time, process processing conditions and executable functions.” *Id.* at 1:61-65; *id.* at 5:7-12. But these bare-bones descriptions in the '518 Patent of what a capability parameter “may include” does not show full possession of the scope of “capability parameter,” nor does it enable a POSITA to practice the full scope of this term without undue experimentation.

The patent disclosure provides no information about how a “capability parameter” is generated, defined, or measured. Further, the '518 Patent provides essentially no information

regarding what the “capability parameter” represents, measures, or defines. To the contrary, the ’518 Patent describes things that may be done based on the status parameter—particularly, including it in a machine profile, forming relations between or grouping machines based on it, or storing it. These disclosures provide no description of what the status parameter measures, describes, or defines. The ’518 Patent only description of the “capability parameter” describes it with reference to what information the “capability parameter” may include—particularly, “sub-parameters related to at least one of a title of an executable process, an input parameter, an output parameter, a process processing time, process processing conditions and executable functions”—while failing to describe how the “capability parameter” may include such sub-parameters.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the ’518 Patent’s specification disclosure.

Thus, claims 11 and 18 are invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“input parameter sub-parameter” (Claim 11).***

The ’518 Patent does not provide adequate written description for or enable the “input parameter sub-parameter” as recited in claim 11.

First, the '518 Patent does not demonstrate that the patentee possessed the full scope of the claimed “input parameter sub-parameter.” The '518 Patent provides almost no disclosure regarding the “input parameter sub-parameter.” The '518 Patent states:

- '518 Patent at 5:7-17: “The sub-parameters of the capability parameter may include the title of a process, which can be processed by each of the machines **201, 202, 204, and 205**, an input parameter, an output parameter, a process processing time, a process processing condition, and multiple functions related to the executable task (function 1, function 2, function 3, . . . , function n). The input parameter may refer to information that is input in order to operate the corresponding machine, and the output parameter may refer to information that is output from the corresponding machine depending on the results of operation. The '518 Patent specification does not demonstrate possession of the full scope of the “status parameter” or enable the generation of a “status parameter” without undue experimentation. The patent disclosure provides no information about how a “status parameter” is generated, defined, or measured. Further, the '518 Patent provides essentially no information regarding what the “status parameter” represents, measures, or defines. To the contrary, the '518 Patent describes things that may be done based on the status parameter—particularly, “forming relations,” “group[ing] machines,” “tak[ing] [the status parameter] into consideration,” and “update[ing] the status parameter”—but not what the status parameter represents. The '518 Patent’s specification provides only a bare-bones, high-level descriptions for this claimed concept, essentially stating that it exists but without any further explanation or teaching. As such the patent fails to show possession or enable the full scope of “status parameter.”

This bare-bones disclosure about what an “input parameter” sub-parameter “may refer to” is insufficient to show possession of the full scope of this term. It also fails to enable a POSITA to practice the full scope of this claim term without undue experimentation.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent’s specification disclosure.

Thus, claim 11 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description

or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“output parameter sub-parameter” (Claim 11).***

The '518 Patent does not provide adequate written description for or enable the “output parameter sub-parameter” as recited in claim 11.

First, the '518 Patent does not demonstrate that the patentee possessed the full scope of the claimed “output parameter sub-parameter.” The '518 Patent provides almost no disclosure regarding the “output parameter sub-parameter.” The '518 Patent states:

- '518 Patent at 5:7-17: “The sub-parameters of the capability parameter may include the title of a process, which can be processed by each of the machines **201, 202, 204, and 205**, an input parameter, an output parameter, a process processing time, a process processing condition, and multiple functions related to the executable task (function 1, function 2, function 3, . . . , function n). The input parameter may refer to information that is input in order to operate the corresponding machine, and the output parameter may refer to information that is output from the corresponding machine depending on the results of operation. The '518 Patent specification does not demonstrate possession of the full scope of the “status parameter” or enable the generation of a “status parameter” without undue experimentation. The patent disclosure provides no information about how a “status parameter” is generated, defined, or measured. Further, the '518 Patent provides essentially no information regarding what the “status parameter” represents, measures, or defines. To the contrary, the '518 Patent describes things that may be done based on the status parameter—particularly, “forming relations,” “group[ing] machines,” “tak[ing] [the status parameter] into consideration,” and “update[ing] the status parameter”—but not what the status parameter represents. The '518 Patent’s specification provides only a bare-bones, high-level descriptions for this claimed concept, essentially stating that it exists but without any further explanation or teaching. As such the patent fails to show possession or enable the full scope of “status parameter.”

This bare-bones disclosure about what an “output parameter” sub-parameter “may refer to” is insufficient to show possession of the full scope of this term. It also fails to enable a POSITA to practice the full scope of this claim term without undue experimentation.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim

limitation, KAIFI's Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent's specification disclosure.

Thus, claim 11 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“process processing time sub-parameter” (Claim 11).***

The '518 Patent does not provide adequate written description for or enable the “process processing time sub-parameter” recited in claim 11.

As an initial matter, the '518 Patent specification provides relatively little discussion of the “process processing time sub-parameter”

- '518 Patent at 1:61-65: “Each of the capability parameters may include sub-parameters related to at least one of a title of an executable process, an input parameter, an output parameter, a process processing time, process processing conditions, and executable functions.”
- *Id.* at 5:7-12: “The sub-parameters of the capability parameter may include the title of a process, which can be processed by each of the machines 201,202,204, and 205, an input parameter, an output parameter, a process processing time, a process processing condition, and multiple functions related to the executable task.”

The '518 Patent specification does not demonstrate possession of the full scope of the “process processing time sub-parameter” or enable the generation of a “process processing time sub-parameter” without undue experimentation. The patent disclosure provides no information about how a “process processing time sub-parameter” is generated, defined, or measured. Further, the '518 Patent provides essentially no information regarding what the “process processing time sub-parameter” represents, measures, or defines. To the contrary, the '518 Patent describes where the “process processing time sub-parameter” may be included—particularly, in the “capability

parameter”—but not what the process processing time sub-parameter represents, measures, or defines.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the ’518 Patent’s specification disclosure.

Thus, claim 11 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“process processing condition sub-parameter” (Claim 11).***

The ’518 Patent does not provide adequate written description for or enable the “process processing condition sub-parameter” recited in claim 11.

The ’518 Patent specification provides almost no discussion of the “process processing condition sub-parameter.” Particularly, the ’518 Patent discloses:

- ’518 Patent at 1:61-65: “Each of the capability parameters may include sub-parameters related to at least one of a title of an executable process, an input parameter, an output parameter, a process processing time, process processing conditions, and executable functions.”
- *Id.* at 5:7-12: “The sub-parameters of the capability parameter may include the title of a process, which can be processed by each of the machines 201,202,204, and 205, an input parameter, an output parameter, a process processing time, a process processing condition, and multiple functions related to the executable task.”

The ’518 Patent specification does not demonstrate possession of the full scope of the “process processing condition sub-parameter” or enable the generation of a “process processing condition sub-parameter” without undue experimentation. The patent disclosure provides no

information about how a “process processing time sub-parameter” is generated, defined, or measured. Further, the ’518 Patent provides essentially no information regarding what the “process processing condition sub-parameter” represents, measures, or defines. To the contrary, the ’518 Patent describes where the “process processing condition sub-parameter” may be included—particularly, in the “capability parameter”—but not what the process processing time sub-parameter represents, measures, or defines..

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the ’518 Patent’s specification disclosure.

Thus, claims 11 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“function sub-parameter” (Claim 11).***

The ’518 Patent does not provide adequate written description for or enable the “function sub-parameter” recited in claim 11.

The term “function sub-parameter” does not appear anywhere in the ’518 Patent outside of the claims. Moreover, to the extent the ’518 Patent describes “function[s], it describes only a limited set of examples of “functions.” Particularly, the only “function[s]” disclosed in the ’518 Patent are “washing,” “rinsing,” and “spin-drying.” ’518 Patent at 5:1-6. And the ’518 Patent does not describe what how any “sub-parameter” would or could relate to those function.

The '518 Patent specification does not demonstrate possession of the full scope of the “function sub-parameter” or enable the generation of a “function sub-parameter” without undue experimentation. The patent disclosure provides no information about how a “function sub-parameter” is generated, defined, or measured. Further, the '518 Patent provides no information regarding what the “function parameter” represents, measures, or defines.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI's Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent's specification disclosure.

Thus, claim 11 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“operating system parameter” (Claim 15).***

The '518 Patent does not provide adequate written description for or enable the “operating system parameter” recited in claim 15.

The '518 Patent's disclosures regarding the “operating system parameter” disclose only a “machine operating system parameter” may be included rather than describing the “operating system parameter.” Particularly, the '518 Patent discloses:

- '518 Patent at 2:5-9: “A machine profile including information about each of the machines may include a capability parameter and a status parameter, and the machine profile may further include at least one of a machine ID parameter, a user ID parameter, a group ID parameter, a machine operating system parameter, and a machine interface parameter.”

- *Id.* at 8:45-52: “According to an embodiment, when the machine profiles are previously registered, the relation server 104 may fixedly store the capability parameters, machine ID parameters, user ID parameters, group ID parameters, machine operating system (OS) parameters, and machine interface parameters, and may update the status parameters while communicating with the machines 101, 102, 105, and 106.”

The ’518 Patent’s only other disclosure regarding the “operating system parameter” teaches that the “operating system parameter may include sub-parameters related to a type and a version of an operating system used by each of the machines.” *Id.* at 2: 10-12, 5:28-30.

The ’518 Patent specification does not demonstrate possession of the full scope of the “operating system sub-parameter” or enable the generation of an “operating system sub-parameter” without undue experimentation. The patent disclosure provides no information about how a “operating system sub-parameter” is generated, defined, or measured. Further, the ’518 Patent provides no information regarding what the “operating system sub-parameter” represents, measures, or defines. Instead, the ’518 Patent’s disclosures focus on where the “operating system sub-parameter” may be included, without providing any description of how it may be included in a machine profile. The ’518 Patent’s only description of the “operating system sub-parameter” describes it with reference to what information it may include—particularly, “sub-parameters related to a type and a version of an operating system”—while failing to describe how the “operating system sub-parameter” may include such sub-parameters.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the ’518 Patent’s specification disclosure.

Thus, claim 15 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“interface parameter” (Claim 16).***

The '518 Patent does not provide adequate written description for or enable the “interface parameter” recited in claim 16.

The '518 Patent's disclosures regarding the “interface parameter” do not describe the “interface parameter,” but instead disclose only where the “interface parameter” may be included or sub-parameters the “interface parameter” may include:

- '518 Patent at 2:5-9: “A machine profile including information about each of the machines may include a capability parameter and a status parameter, and the machine profile may further include at least one of a machine ID parameter, a user ID parameter, a group ID parameter, a machine operating system parameter, and a machine interface parameter.”
- *Id.* at 2:13-16: “The machine interface parameter may include sub-parameters related to interfaces and interface protocols between 15 the machines, and interfaces and interface protocols between each machine and the relation server.”
- *Id.* at 2:30-35: “The task processing schedule parameter may include sub-parameters related to at least one of a process start time of each process, process start conditions, machine IDs of allocated machines, functions that are used, a start time of each of the functions, a predicted process termination time, interface parameters, and process termination conditions.”
- *Id.* at 5:31-37: “The sub-parameters of the machine interface parameter may include interface protocols between the machines 101, 102, 105, and 106, interface parameters between the machines 101, 102, 105, and 106, interface protocols between each machine 101, 102, 105, or 106 and the relation server 104, and interface parameters between each machine 101, 102, 105, or 106 and the relation server 104.”
- *Id.* at 7:51-57: “According to an embodiment, the sub-parameters of the task processing schedule parameter may include the process start time of each process, the start condition(s) of each process, the machine IDs of machines allocated, the functions used, the start time of each of the functions, the predicted termination

time of the process, interface parameters, the termination condition(s) of the process, etc.”

- *Id.* at 8:45-52: “According to an embodiment, when the machine profiles are previously registered, the relation server 104 may fixedly store the capability parameters, machine ID parameters, user ID parameters, group ID parameters, machine operating system (OS) parameters, and machine interface parameters, and may update the status parameters while communicating with the machines 101, 102, 105, and 106.”

The ’518 Patent specification does not demonstrate possession of the full scope of the “interface parameter” or enable the generation of an “interface parameter” without undue experimentation. The patent disclosure provides no information about how a “interface parameter” is generated, defined, or measured. Further, the ’518 Patent provides no information regarding what the “interface parameter” represents, measures, or defines. Instead, the ’518 Patent’s disclosures focus on where the “interface parameter” may be included, without providing any description of how it may be included in a machine profile or a task processing schedule parameter. The ’518 Patent’s only description of the “interface parameter” describes it with reference to what information it may include—particularly, “sub-parameters related to interfaces and interface protocols”—while failing to describe how the “interface parameter” may include such sub-parameters, or showing possession of the full scope of “interface parameter” or providing a POSITA with information sufficient to practice the full scope of that term.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI’s Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the ’518 Patent’s specification disclosure.

Thus, claim 16 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description

or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“information related to grouping the multiple machines” (Claim 17).***

The '518 Patent does not provide adequate written description for or enable “information related to grouping the multiple machines” as recited in claim 17.

The specification of the '518 Patent does not describe what “information” can or should be saved in the relation server that is “related to grouping the multiple machines.” And it certainly does not describe or show possession of all possible kinds of information that could be considered “related to the grouping of multiple machines.” Furthermore, the '518 Patent provides no information that would enable a POSITA to practice the scope of such a claim limitation.

While KAIFI has avoided taking a position in its Initial Infringement Contentions regarding what accused structures/instrumentalities/information purportedly satisfy this claim limitation, KAIFI's Initial Infringement Contentions appear to accuse various structures, information, and instrumentalities that are not described or enabled by the '518 Patent's specification disclosure.

The '518 Patent does not adequately describe or enable this broad a scope of the term “information related to grouping the multiple machines.” Instead, the '518 Patent's description/enablement of “information related to grouping the multiple machines” is limited. Particularly, the '518 Patent describes “information related to grouping the multiple machines” in only the following disclosures:

- '518 Patent at 1:50-60: “In accordance with an aspect of the present invention to accomplish the above object, there is provided a method for operating a relation server, the relation server managing relations between machines, including generating, by the relation server, a capability set required to execute a command by analyzing the command, and grouping, by the relation server, machines that are to execute the command, among the machines, based on the generated capability

set, and capability parameters and status parameters of respective machines that have been previously registered in the relation server or that are extractable by the relation server.” *See also id.* at 2:52-62, 5:56-61, 7:33-36, 9:18-22, 11:22-27.

- *Id.* at 46:49: “The method may further include re-grouping, by the relation server, the machines according to the approval or the selection of the user, and forming, by the relation server, new relations between the re-grouped machines.” *See also id.* at 6:41-46.

In total, these disclosures describe “information related to grouping the multiple machines” as limited to “the generated capability set, and capability parameters and status parameters,” and “the approval or selection of the user.” This limited description of the scope of the limitation in the ’518 Patent stands in stark contrast to the apparent scope KAIFI has afforded the term in its Infringement Contentions.

Accordingly, claim 17 as KAIFI interprets it in its Infringement Contentions is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“generates a capability set required to execute a user command” (Claim 18).***

The ’518 Patent does not provide adequate written description for or enable “generat[ing] a capability set required to execute a user command” recited in claim 18.

The ’518 Patent’s disclosures regarding the limitation are limited to the fact that a “capability set” is “generat[ed]”; the ’518 Patent provides no disclosure of how the “capability set” is generated. Particularly, the ’518 Patent discloses “there is provided a method for operating a relation server, the relation server managing relations between machines, including generating, by the relation server, a capability set required to execute a command by analyzing the command.” ’518 Patent at 1:52-55; *see also id.* at 2:52-62, 5:56-60, 9:12-17, 10:33-39. Notably, the ’518

Patent does not disclose what analysis is performed on the command, nor does it describe how that analysis is used to generate the capability set.

The '518 Patent's description of "capability set" is similarly vague. The '518 Patent discloses that "the term 'capability set' may be used as a concept having a level which is equivalent to the task. For example, work, that is, a capability set corresponding to a task, such as housework, may be composed of processes (or functions) such as 'cleaning,' 'doing the dishes,' and 'doing the laundry.'" *Id.* at 8:1-6. While this provides some context as to the meaning of a task, a process, and a function in the context of the '518 Patent, it provides no further disclosures describing what a "capability set" is. Because it includes such deficient descriptions of regarding "generat[ing] a capability set required to execute a user command," the '518 Patent specification does not demonstrate possession of the full scope of the limitation or enable "generat[ing] a capability set required to execute a user command" without undue experimentation.

Thus, claim 18 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

***“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” (Claim 18).***

The '518 Patent does not provide adequate written description for or enable "generat[ing] 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" recited in claim 18.

As explained above, the '518 Patent fails to provide adequate written description for or enable the claim terms “task processing schedule parameter,” “status parameter,” “capability set,” or “capability parameter.” For the same reasons that the '518 Patent lacks description or enablement of the “task processing schedule parameter,” “status parameter,” “capability set” and/or “capability parameter” terms, the '518 Patent lacks written description or enablement for “generat[ing]” the “task processing schedule parameter,” “status parameter,” or “capability parameter.” The '518 Patent also fails to show possession or enable a POSITA to practice the full scope of “generat[ing] the task processing schedule parameter” “according to” these various, largely undisclosed parameters and sets.

Thus, claim 18 is invalid for lack of proper written description and enablement. Further, because the claims depending from these claims fail to provide any additional written description or enablement support, such dependent claims are likewise invalid for lack of proper written description and enablement.

## **2. Indefiniteness**

“A patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014). The patent itself must “describe the exact scope of an invention.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996). “The definiteness requirement must take into account the inherent limitations of language,” but at the same time, “a patent must be precise enough to afford clear notice of what is claimed.” *Nautilus, Inc.*, 134 S.Ct. at 2128-29.

The following claim terms are indefinite because they fail to inform a person of ordinary skill the scope of the invention with reasonable certainty:

***“task processing schedule parameter” (Claims 1, 8, 18).<sup>2</sup>***

Claims 1, 8, and 18 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of “task processing schedule parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art.

Neither the ’518 Patent nor the prosecution history of the ’518 Patent make reasonably clear what is the “task processing schedule parameter.”

The ’518 Patent discloses that a “relation profile may include . . . a task description parameter,” but does not describe the scope of the included “task description parameter” is. ’518 Patent at 2:26-27, 7:28-29. The only disclosure describing the scope of “task description parameter” discloses that it “*may include* various types of additional information related to the relevant task” such as “details about the tasks for the relevant task in the form of text.” *Id.* at 7:42-45. Such a disclosure does not enable a POSITA to determine with reasonable certainty the scope of the claim term, including because the scope necessarily includes “task description parameter[s]” that do not fall into the limited, optional scope described in the ’518 Patent. For these reasons, the claim term is indefinite.

***“selected machines” (Claims 1, 2).***

Claims 1 and 2 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of “selected machines” in light

<sup>2</sup> In these headings, Defendants identify the claim(s) that contain the particular term(s) being discussed. It should be understood that all claims that depend from the identified claim(s) are also invalid on the same grounds and for the same reasons, as the relevant dependent claims do not provide additional clarity to these claim term(s), add additional limitations that resolve the indefiniteness, or provide structural information resolving any indefiniteness of the claims.

of the specification and prosecution history of the '518 Patent. This claim term did not have a known, generally accepted meaning in the art.

Neither the '518 Patent nor the prosecution history of the '518 Patent make reasonably clear the scope of the “selected machines.” The term “selected machines” is not a term known in the art. Further, the '518 Patent does not describe what the “selected machines” are, or how, by what/whom, or when they are supposedly “selected”; notably, the term “selected machines” does not appear anywhere in the '518 Patent outside of the claims.

Moreover, the '518 Patent does not disclose “select[ing]” any set of “machine[s]” that could be understood as the claimed “selected machines.” The '518 Patent’s only references to a “selection” of machines in the '518 Patent discloses:

“The method may further include re-grouping, by the relation server, the machines according to the approval or the selection of the user, and forming, by the relation server, new relations between the re-grouped machines.” '518 Patent at 2:46-59.

This selection of machines for the purpose of “re-grouping” the machines would not allow a POSITA to determine the scope of a group of “selected machines . . . to perform the multiple processes” as claimed in claims 1 and 2. Accordingly, the claim term is indefinite, and claims 1 and 2 are invalid.

***“intervention” / “intervention by a user in the relation profile” (Claims 1, 19, 20).***

Claims 1, 19, and 20 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “intervention” / “intervention by a user in the relation profile” in light of the specification and prosecution history of the '518 Patent. This claim term did not have a known, generally accepted meaning in the art.

Neither the '518 Patent nor the prosecution history of the '518 Patent make reasonably clear the scope of the “intervention” claim terms. The terms “intervention” / “intervention by a user in the relation profile” are not terms with well-known, agreed meanings in the art. Further, the '518 Patent does teach the scope of the “intervention by a user in the relation profile,” but instead only discloses features the “intervention” *may* have and when it *may* occur. Particularly, the '518 Patent discloses:

- '518 Patent at 2:41-43: “[A]n intervention of a user” may be “based on processes include in the relation profile.”
- *id.* at 2:44-45: “The intervention of the user may include an approval or a selection of the user related to an execution of the process.” *See also* 6:26-28.
- *Id.* at 6:32-36: “The said user intervention step may be performed at various times.”

Notably, none of the '518 Patent’s teachings regarding “intervention[s] by a user” disclose what the “intervention[s]” are or how those “intervention[s]” are “in the relation profile” as is claimed in claims 1, 19, and 20. Thus, the '518 Patent does not enable a POSITA to determine the scope of the claimed “intervention” / “intervention by a user in the relation profile,” and claims 1, 19, and 20 are indefinite and invalid.

***“processes” (Claims 1, 2, 8, 19, 20).***

Claims 1, 2, 8, 19, and 20 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “processes” in light of the specification and prosecution history of the '518 Patent. This claim term did not have a known, generally accepted meaning in the art.

The '518 Patent describes only a limited set of examples of “processes.” Particularly, the only “processes” disclosed in the '518 Patent are “cleaning,” “doing the dishes,” and “doing the laundry.” '518 Patent at 8:3-6. With only this limited list of examples and no further definition of the scope of the term, a POSITA would not be able to determine what, if any, other items fall

within the scope of the claimed “processes.” Thus, the claim term “processes” is indefinite and claims 1, 2, 8, 19, and 20 are invalid.

***“the selected machine” (Claim 2).***

Claim 2 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “selected machine” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art. Further, the term “selected machine” does not appear anywhere in the ’518 Patent outside of the claims.

Moreover, the ’518 Patent does not describe “select[ing]” any “machine” that could be understood as the claimed “selected machine.” The ’518 Patent’s only references to a “selection” of machines discloses:

“The method may further include re-grouping, by the relation server, the machines according to the approval or the selection of the user, and forming, by the relation server, new relations between the re-grouped machines.” ’518 Patent at 2:46-59.

This selection of a plural group of machines does disclose the scope of the singular “selected machine” claimed in claim 2. Thus, the claim term “the selected machine” is indefinite and claim 2 is invalid.

Additionally, “the selected machine” limitation of claim 2 is indefinite for lack of an antecedent basis. A claim is indefinite if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable. Claim 2 depends on claim 1. However, claim 1 does not identify any particular “selected machine” upon which claim 2’s “the selected machine” could depend. To the contrary, claim 1 discloses only a plural “selected machines,” a term which, itself, is indefinite, as explained above. Thus, claim 2’s “the selected machine” does not have any explicit antecedent basis.

Further, an antecedent basis for “the selected machine” is neither implied nor reasonably ascertainable from claim 1. Claim 1 does not describe any particular “selected machine.” To the contrary, claim 1 only mentions a plural “selected machines,” not any individual “selected machine.” Such a plural group of “machines” does not identify any particular “selected machine.” Such a determination does not imply the computation of any rate. Thus, there is no explicit or implied antecedent basis for “the selected machine” in claim 1 or 2, and the claim term is indefinite.

***“forwards a command” / “command” (Claims 2, 3, 4, 5, 6, 7, 18).***

Claims 2, 3, 4, 5, 6, 7, and 18 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “command” / “forward[ing] a command” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art.

The ’518 Patent’s disclosures related to “command[s]” disclose things that may be done to a command, but not what does or does not fall within the scope of a “command.” Particularly, the ’518 Patent discloses:

- ’518 Patent at 1:27-29: “[E]xternally receiv[ing] a command.” *See also id.* at 9:4-8.
- *Id.* at 1:49: “[E]xecut[ing] externally received commands.” *See also id.* at 8:9, 8:30, 9:17, 11:22-2.
- *Id.* at 1:55: “[A]nalyzing the command.” *See also id.* at 2:57, 5:57, 6:15, 6:53, 9:12-13.
- *Id.* at 2:39-40: “[C]ompleting the execution of the command.”
- *Id.* at 10:31: “[T]ransmit[ting] a command.”

But none of these disclosures regarding what may be done with or to a command inform a POSITA of the scope of the “command” term. Indeed, the only disclosure regarding what falls within the scope of the claimed “command” in the ’518 Patent is a single example of a “movie

recommendation command.” *Id.* at 9:4-5. With only this single example and no further definition of the scope of the term, a POSITA would not be able to determine what, if any, other items fall within the scope of the claimed “command.” Thus, the claim terms “command” / “forwards a command” are indefinite and claims 2, 3, 4, 5, 6, 7, 18 are invalid.

***“capability set parameter” (Claim 4).***

Claim 4 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “capability set parameter” in light of the specification and prosecution history of the ’518 Patent. The ’518 Patent provides a “relation profile may include . . . a capability set parameter,” but does not describe the scope of the claimed “capability set parameter.” ’518 Patent at 2:26-27, 7:28-29. The only disclosure regarding the scope of the “capability set parameter” teaches that it “may include information about capability parameters.” *Id.* at 7:33-35. Such a disclosure describing only an optional feature of a “capability set parameter” would not enable a POSITA to determine with reasonable certainty what does or does not fall within the scope of the claimed “capability set parameter.”

Thus, claim term “capability set parameter” is indefinite and claim 4 is invalid.

***“group parameter” (Claim 5).***

Claim 5 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “group parameter” in light of the specification and prosecution history of the ’518 Patent. “[G]roup parameter” is not a term known in the art. Further, the term “group parameter” does not appear anywhere in the ’518 Patent outside of the claims. This claim term did not have a known, generally accepted meaning in the art.

The '518 Patent does disclose a “group ID parameter.” However, the recitation of “group parameter” in claim 5 makes clear that it is separate from the “group ID parameter.” The '518 Patent discloses that the group ID parameter “denotes a unique identifier allocated to a user group . . . that is capable of utilizing the machines.” '518 Patent at 5:24-27. In contrast, claim 5 recites that the “group parameter” “corresponds to identity of machines,” not the identity of a user group. *Id.* at cl. 5. Accordingly, the '518 Patent’s disclosure regarding the “group ID parameter” does not provide any information regarding the scope of the claimed “group parameter.” Because the '518 Patent does not enable a POSITA to determine with reasonable certainty what does or does not fall within the scope of the claimed “group parameter,” the term is indefinite and claim 5 is invalid.

***“group identity parameter” (Claims 6).***

Claim 6 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “group identity parameter” in light of the specification and prosecution history of the '518 Patent. “[G]roup identity parameter” is not a term known in the art. Further, the term “group identity parameter” does not appear anywhere in the '518 Patent outside of the claims. This claim term did not have a known, generally accepted meaning in the art.

The '518 Patent does disclose a “group ID parameter.” However, the recitation of “group identity parameter” in claim 6 makes clear that it is separate from the “group ID parameter.” The '518 Patent discloses that the group ID parameter “denotes a unique identifier allocated to a user group . . . that is capable of utilizing the machines.” '518 Patent at 5:24-27. In contrast, claim 6 recites that the “group identity parameter” “corresponds to an identity of a group consisting of machines,” not the identity of a user group. *Id.* at cl. 6. Accordingly, the '518 Patent’s disclosure

regarding the “group ID parameter” does not provide any information regarding the scope of the claimed “group identity parameter.” Because the ’518 Patent does not enable a POSITA to determine with reasonable certainty what does or does not fall within the scope of the claimed “group identity parameter,” the term is indefinite and claim 6 is invalid.

***“task description parameter” (Claim 7).***

Claim 7 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “task description parameter” in light of the specification and prosecution history of the ’518 Patent. The ’518 Patent provides a “relation profile may include . . . a task description parameter,” but does not describe the scope of the included “task description parameter.” ’518 Patent at 2:26-27, 7:28-29. The only disclosure describing the “task description parameter” discloses that it “may include various types of additional information related to the relevant task” such as “details about the tasks for the relevant task in the form of text.” *Id.* at 7:42-45. Such a disclosure describing only information that may be optionally included in the “task description set parameter” would not enable a POSITA to determine with reasonable certainty what does or does not fall within the scope of the claimed “task description parameter.” This claim term did not have a known, generally accepted meaning in the art.

Thus, claim term “task description parameter” is indefinite and claim 7 is invalid.

***“start condition” (Claim 8).***

Claim 8 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “start condition” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a

known, generally accepted meaning in the art. The '518 Patent provides only two disclosures regarding a “start condition”:

- '518 Patent at 2:30-35: “The task processing schedule parameter may include sub-parameters related to at least one of a process start time of each process, process start conditions, machine IDs of allocated machines, functions that are used, a start time of each of the functions, a predicted process termination time, interface parameters, and process termination conditions.”
- *Id.* at 7:51-57: “According to an embodiment, the sub-parameters of the task processing schedule parameter may include the process start time of each process, the start condition(s) of each process, the machine IDs of machines allocated, the functions used, the start time of each of the functions, the predicted termination time of the process, interface parameters, the termination condition(s) of the process, etc.”

Each of these disclosures teaches only that a “start condition” may be a sub-parameter of the task processing schedule parameter. These disclosures provide no information regarding what does or does not fall within the scope of the claimed “start condition.” For example, based only on the term itself, the “start condition” could be a prerequisite condition needed to start the process, a description of a state in which the process starts, or any other number of scopes related to a “start condition.” However, without any disclosures in the '518 Patent regarding the scope of the term as it is used in the patent, a POSITA would not be able to determine with reasonable certainty what does or does not fall within the scope of the claimed “start condition.”

Thus, the claim term “start condition” is indefinite and claim 8 is invalid.

***“machine profile(s)” (Claims 9, 10, 11, 12, 13, 14, 15, 16).***

Claims 9, 10, 11, 12, 13, 14, 15, 16 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “machine profile(s)” in light of the specification and prosecution history of the '518 Patent. This claim term did not have a known, generally accepted meaning in the art. The '518 Patent's disclosures regarding “machine profile(s)” teach only some features and information that

the profiles *may* include, thus leaving the scope of the claim term open ended and indefinite.

Particularly, the '518 Patent discloses:

- '518 Patent at 2:5-10: “A machine profile including information about each of the machines may include a capability parameter and a status parameter, and the machine profile may further include at least one of a machine ID parameter, a user ID parameter, a group ID parameter, a machine operating system parameter, and a machine interface parameter.”
- *Id.* at 4:21-28: “Each of multiple machines 101, 102, 105, and 106 may have its own machine profile. The machine profile means data including various types of information related to each machine 101, 102, 105, or 106. According to an embodiment, the machine profile may include at least one of the parameters of the machine profile presented in the following Table 1. Each of the machine profile parameters may include at least one sub-parameter.”
- *Id.* at 5:38-46: “In accordance with an embodiment, the machine profile may be defined and implemented in the form of a schema having a hierarchical structure. That is, the machine profile may be defined and implemented as a data structure having a structure system such as that given in Table 1. In this case, the machine profile may further include a tag, indicating the last portion of each parameter (or machine profile), in the last portion of each parameter (or the last portion of the machine profile).”
- *Id.* at 8:42-52: “The machine profiles of the machines 101, 102, 105, and 106 may be previously registered in the relation server 104 and may be transmitted to the relation server 104 at the 45 request of the relation server 104. According to an embodiment, when the machine profiles are previously registered, the relation server 104 may fixedly store the capability parameters, machine ID parameters, user ID parameters, group ID parameters, machine operating system (OS) parameters, and machine interface parameters, and may update the status parameters while communicating with the machines 101, 102, 105, and 106.”
- *Id.* at 9:43-49: “For example, the relation server 104 may set the sequence of operations of the machines 101, 102, 105, and 106 based on the machine profiles ( capability parameters, status parameters, etc.) of the respective machines 101, 102, 105, and 106, and may then arrange the machine IDs according to the set sequence and store the arranged machine IDs in the relation profile.”

These limited disclosures regarding a partial set of information and features that may be included in a “machine profile” necessarily omit some scope of items that are “machine profile(s)” but do not define or describe this optional information. Accordingly, the '518 Patent's disclosures regarding “machine profile(s)” do not sufficiently set out the metes and bounds of the term such

that a POSITA would be able to determine with reasonable certainty the scope of the term.

Thus, the claim term “machine profile(s)” is indefinite and claims 9, 10, 11, 12, 13, 14, 15, 16 are invalid.

***“status parameter” (Claims 10, 18).***

Claims 10 and 18 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “status parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art. The ’518 Patent’s disclosures related to “status parameter[s]” disclose things that may be done to or with a “status parameter,” but do not address the scope of the “status parameter” term. Particularly, the ’518 Patent discloses:

- ’518 Patent at 2:5-7: “A machine profile . . . may include . . . a status parameter.”
- *Id.* at 2:17-20: “[F]orming relations between the grouped machines based on the . . . status parameter.”
- *Id.* at 5:56-61: “[G]roup[ing] the machines 101, 102, 105, and 106 based on the . . . status parameters.”
- *Id.* at 8:13-16: “[T]he arrangement corresponding to the . . . status parameter of respective machines 101, 102, 105, and 106 may be taken into consideration.”
- *Id.* at 8:45-52: “[T]he relation server . . . may update the status parameters.”

The only description related to the scope of a “status parameter” in the ’518 Patent describes only optional features and information that a “status parameter” may include or represent, such as “sub-parameters related to at least one of a current active state, current availability of unavailability, a current process, a scheduled termination time for the current process state, a currently executed function, and a scheduled termination time.” *Id.* at 1:66-2:6, 4:60-67. This disclosure of sub-parameters that some “status parameters” may include does not

set out the scope of the “status parameter” term such that a POSITA would be able to determine the scope with reasonable certainty.

Thus, the claim term “status parameter” is indefinite and claims 10 and 18 are invalid.

***“current execution function sub-parameter” (Claim 10).***

Claim 10 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “current execution function sub-parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art. The ’518 Patent teaches:

“The currently executed function may denote the function that is currently being executed among various functions that are executed in order to perform a single process. For example, the currently executed function may be a function such as ‘washing’, ‘rinsing’, or ‘spin-drying’, performed for the process ‘laundrying’.” ’518 Patent at 5:1-6.

This disclosure would not enable a POSITA to determine with reasonable certainty the scope of the “current execution function sub-parameter.” Particularly, while the disclosure does provide examples of functions, it does not explain how a “current execution function sub-parameter” “denote[s]” those functions. For example, based on the ’518 Patent’s disclosures, a POSITA would be unable to determine whether the “current execution function sub-parameter” may include only the term “washing” to refer to the function that is currently being executed, or if a “current execution function sub-parameter” must include code or some other form of instruction for actually performing the currently executed function. Because the ’518 Patent lacks disclosures from which a POSITA could determine the metes and bounds of the “current execution function sub-parameter” with reasonable certainty, the claim term is indefinite and claim 10 is invalid.

***“scheduled termination time of currently executed function sub-parameter” (Claim 10).***

Claim 10 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “scheduled termination

time of currently executed function sub-parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term/phrase did not have a known, generally accepted meaning in the art. The ’518 Patent teaches:

“Referring to Table 1, the sub-parameters of the status parameter may include the current active state of each of the machines 101, 102, 105, and 106, information about whether each of the machines 101, 102, 105, and 106 is currently available or unavailable (i.e. in a standby state), a current process, a scheduled termination time of the current process, the currently executed function, and the scheduled termination time of the currently executed function..” ’518 Patent at 4:60-67.

This disclosure would not enable a POSITA to determine with reasonable certainty the scope of the “scheduled termination time of currently executed function sub-parameter.” Particularly, it does not what a “scheduled termination time of currently executed function sub-parameter” denotes. For example, based on the ’518 Patent’s disclosures, a POSITA would be unable to determine whether the “scheduled termination time of currently executed function sub-parameter” may denote merely an estimate of when a function is scheduled to terminate, or if it must denote an exact time at which the currently executed function will be forcibly terminated whether the function is completed or not. Because the ’518 Patent lacks disclosures from which a POSITA could determine the metes and bounds of the “scheduled termination time of currently executed function sub-parameter” with reasonable certainty, the claim term is indefinite and claim 10 is invalid.

***“capability parameter” (Claims 11, 18).***

Claims 11 and 18 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “capability parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art.

The '518 Patent's disclosures regarding the "capability parameter" disclose what may be done with or to a "capability parameter," rather than describing the scope of the term. Particularly, the '518 Patent discloses a "machine profile . . . may include a capability parameter," "forming relations between the grouped machines based on the . . . capability parameter," "grouping . . . machines . . . based on the . . . capability parameters," and "the relation server 104 may fixedly store the capability parameters." *Id.* at 1:55-60, 2:5-9, 2:17-20, 8:45-52.

The only disclosures describing the scope of the "capability parameter" disclose that it "may include sub-parameters related to at least one of a title of an executable process, an input parameter, an output parameter, a process processing time, process processing conditions and executable functions." *Id.* at 1:61-65. Such a disclosure describing only information that may be optionally included in the "capability parameter" would not enable a POSITA to determine with reasonable certainty what does or does not fall within the scope of the claimed "capability parameter."

Thus, the claim term "capability parameter" is indefinite and claims 11 and 18 are invalid.

***"input parameter sub-parameter" (Claim 11).***

Claim 11 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed "input parameter sub-parameter" in light of the specification and prosecution history of the '518 Patent. This claim term did not have a known, generally accepted meaning in the art.

The '518 Patent's only disclosure regarding the "input parameter" discloses: "The input parameter may refer to information that is input in order to operate the corresponding machine." '518 Patent at 5:13-17. This disclosure would not enable a POSITA to determine with reasonable certainty the scope of the "input parameter sub-parameter." Particularly, it does not disclose what

a “information” may be input or what “information” is used “to operate the corresponding machine.” For example, based on the ’518 Patent’s disclosures, a POSITA would be unable to determine whether the position of a mouse input to a machine to denote the location of a cursor on a display would constitute an “input parameter sub-parameter,” or if the “input parameter sub-parameter” must input instructions used to operate the machine, such as code or machine-readable instructions.

Further, the ’518 Patent teaches that the “input parameter sub-parameter” only “may refer to information that is input.” *Id.* The conditional “may” means there must be some other “input parameter sub-parameter” that does not “refer to information that is input in order to operate the corresponding machine” and that is not set out in the ’518 Patent. Because these other, unknowable categories of “input parameter sub-parameters” are not disclosed in the ’518 Patent, the patent does not set out the scope of the term with reasonable certainty.

Because the ’518 Patent lacks disclosures from which a POSITA could determine the metes and bounds of the “input parameter sub-parameter” with reasonable certainty, the claim term is indefinite and claim 11 is invalid.

***“output parameter sub-parameter” (Claim 11).***

Claim 11 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “output parameter sub-parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art.

The ’518 Patent’s only disclosure regarding the “output parameter” discloses: “[T]he output parameter may refer to information that is output from the corresponding machine depending on the results of operation.” ’518 Patent at 5:13-17. The conditional “may” means

there must be some other “output parameter sub-parameter” that does not “refer to information that is output from the corresponding machine depending on the results of operation” and that is not set out in the ’518 Patent. Because these other, unknowable categories of “input parameter sub-parameters” are not disclosed in the ’518 Patent, the patent does not set out the scope of the term with reasonable certainty.

Thus, the term “output parameter sub-parameter” is indefinite, and claim 11 is invalid.

***“process processing time sub-parameter” (Claim 11).***

Claim 11 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “process processing time sub-parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art.

All of the ’518 Patent’s disclosures regarding the “process processing condition sub-parameter” disclose where the “process processing condition sub-parameter” may be included, not the scope of the “process processing condition sub-parameter.” Particularly, the ’518 Patent discloses:

- ’518 Patent at 1:61-65: “Each of the capability parameters may include sub-parameters related to at least one of a title of an executable process, an input parameter, an output parameter, a process processing time, process processing conditions, and executable functions.”
- *Id.* at 5:7-12: “The sub-parameters of the capability parameter may include the title of a process, which can be processed by each of the machines 201,202,204, and 205, an input parameter, an output parameter, a process processing time, a process processing condition, and multiple functions related to the executable task.”

These disclosures discuss “process processing time” as a possible sub-parameter, but do not provide any indication of the scope of the “process processing time sub-parameter,” such as its contents or the type(s) of information that are to be contained therein. Accordingly, a POSITA

would not be able to determine with reasonable certainty the scope of the claimed “process processing time sub-parameter,” the term is indefinite, and claim 11 is invalid.

***“process processing condition sub-parameter” (Claim 11).***

Claim 11 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “process processing condition sub-parameter” in light of the specification and prosecution history of the ’518 Patent.

All of the ’518 Patent’s disclosures regarding the “process processing condition sub-parameter” disclose where the “process processing condition sub-parameter” may be included, but do not indicate the scope of the “process processing condition sub-parameter.” Particularly, the ’518 Patent discloses:

- ’518 Patent at 1:61-65: “Each of the capability parameters may include sub-parameters related to at least one of a title of an executable process, an input parameter, an output parameter, a process processing time, process processing conditions, and executable functions.”
- *Id.* at 5:7-12: “The sub-parameters of the capability parameter may include the title of a process, which can be processed by each of the machines 201,202,204, and 205, an input parameter, an output parameter, a process processing time, a process processing condition, and multiple functions related to the executable task.”

These disclosures do not provide any indication of the scope of the “process processing condition sub-parameter,” such as what information type(s) are to be included within this sub-parameter. Accordingly, a POSITA would not be able to determine with reasonable certainty the scope of the claimed “process processing condition sub-parameter,” the term is indefinite, and claim 11 is invalid.

***“function sub-parameter” (Claim 11).***

Claim 11 (and all claims that depend therefrom) are indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “function sub-

parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art.

The term “function sub-parameter” does not appear anywhere in the ’518 Patent outside of the claims. Moreover, to the extent the ’518 Patent describes “function[s],” it describes only a limited set of examples of “function[s].” Particularly, the only “function[s]” disclosed in the ’518 Patent are “washing,” “rinsing,” and “spin-drying.” ’518 Patent at 5:1-6. With only this limited list of examples and no further definition of the scope of the term, a POSITA would not be able to determine what, if any, other items fall within the scope of “functions.”

Moreover, the ’518 Patent does not denote what information about the “function” may or may not be included in the “function sub-parameter.” For example, a POSITA would not be able to determine with reasonable certainty whether the “function sub-parameter” may simply contain the text “washing” referring to the “washing” function, or if it must include code or other forms of instructions for executing the “washing” function.

Accordingly, a POSITA would not be able to determine with reasonable certainty the scope of the claimed “function sub-parameter,” the term is indefinite, and claim 11 is invalid.

***“operating system parameter” (Claim 15).***

Claim 15 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “operating system parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art.

The ’518 Patent’s disclosures regarding the “operating system parameter” disclose and describe that a “machine operating system parameter” may be included in a “machine profile,” but fails to describe what a “machine operating system parameter” is, much less what would be

encompasses by an (apparently more general) “operating system parameter.” Particularly, the ’518 Patent discloses:

- ’518 Patent at 2:5-9: “A machine profile including information about each of the machines may include a capability parameter and a status parameter, and the machine profile may further include at least one of a machine ID parameter, a user ID parameter, a group ID parameter, a machine operating system parameter, and a machine interface parameter.”
- *Id.* at 8:45-52: “According to an embodiment, when the machine profiles are previously registered, the relation server 104 may fixedly store the capability parameters, machine ID parameters, user ID parameters, group ID parameters, machine operating system (OS) parameters, and machine interface parameters, and may update the status parameters while communicating with the machines 101, 102, 105, and 106.”

These disclosures do not provide any indication of the scope of the “operating system parameter,” whether or not it is coextensive or at least partially overlapping with the unspecified concept of a “machine operating system parameter.”

The ’518 Patent’s only other disclosure regarding the “operating system parameter” teaches that the “machine operating system parameter may include sub-parameters related to a type and a version of an operating system used by each of the machines.” *Id.* at 2: 10-12, 5:28-30. Such a disclosure describing only information that may be optionally included in a “machine operating system parameter” would not enable a POSITA to determine with reasonable certainty what does or does not fall within the scope of the claimed “operating system parameter.”

Thus, the “operating system parameter” term is indefinite, and claim 15 is invalid.

***“interface parameter” (Claim 16).***

Claim 16 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “interface parameter” in light of the specification and prosecution history of the ’518 Patent. This claim term did not have a known, generally accepted meaning in the art.

The '518 Patent's disclosures regarding the "interface parameter" disclose only where the "interface parameter" may be included and what sub-parameters the "interface parameter" may include, but does not provide meaningful information about the scope of the "interface parameter" term. Particularly, the '518 Patent discloses:

- '518 Patent at 2:5-9: "A machine profile including information about each of the machines may include a capability parameter and a status parameter, and the machine profile may further include at least one of a machine ID parameter, a user ID parameter, a group ID parameter, a machine operating system parameter, and a machine interface parameter."
- *Id.* at 2:13-16: "The machine interface parameter may include sub-parameters related to interfaces and interface protocols between 15 the machines, and interfaces and interface protocols between each machine and the relation server."
- *Id.* at 2:30-35: "The task processing schedule parameter may include sub-parameters related to at least one of a process start time of each process, process start conditions, machine IDs of allocated machines, functions that are used, a start time of each of the functions, a predicted process termination time, interface parameters, and process termination conditions."
- *Id.* at 5:31-37: "The sub-parameters of the machine interface parameter may include interface protocols between the machines 101, 102, 105, and 106, interface parameters between the machines 101, 102, 105, and 106, interface protocols between each machine 101, 102, 105, or 106 and the relation server 104, and interface parameters between each machine 101, 102, 105, or 106 and the relation server 104."
- *Id.* at 7:51-57: "According to an embodiment, the sub-parameters of the task processing schedule parameter may include the process start time of each process, the start condition(s) of each process, the machine IDs of machines allocated, the functions used, the start time of each of the functions, the predicted termination time of the process, interface parameters, the termination condition(s) of the process, etc."
- *Id.* at 8:45-52: "According to an embodiment, when the machine profiles are previously registered, the relation server 104 may fixedly store the capability parameters, machine ID parameters, user ID parameters, group ID parameters, machine operating system (OS) parameters, and machine interface parameters, and may update the status parameters while communicating with the machines 101, 102, 105, and 106."

The disclosures describing where the “interface parameter” may be located do not provide any description of the scope of the “interface parameter.” Further, the ’518 Patent disclosures describing sub-parameters that the “interface parameter” *may* have would not enable a POSITA to determine with reasonable certainty the metes and bounds of the claimed “interface parameter.”

Thus, the “interface parameter” term is indefinite, and claim 16 is invalid.

***“information related to grouping the multiple machines” (Claim 17).***

Claim 17 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the claimed “information related to grouping the multiple machines” in light of the specification and prosecution history of the ’518 Patent. This claim term/phrase did not have a known, generally accepted meaning in the art.

The ’518 Patent’s only disclosures regarding “information related to grouping the multiple machines” are as following:

- ’518 Patent at 1:50-60: “In accordance with an aspect of the present invention to accomplish the above object, there is provided a method for operating a relation server, the relation server managing relations between machines, including generating, by the relation server, a capability set required to execute a command by analyzing the command, and grouping, by the relation server, machines that are to execute the command, among the machines, based on the generated capability set, and capability parameters and status parameters of respective machines that have been previously registered in the relation server or that are extractable by the relation server.” *See also id.* at 2:52-62, 5:56-61, 7:33-36, 9:18-22, 11:22-27.
- *Id.* at 46:49: “The method may further include re-grouping, by the relation server, the machines according to the approval or the selection of the user, and forming, by the relation server, new relations between the re-grouped machines.” *See also id.* at 6:41-46.

In sum, these bare-bones disclosures teach that “information related to grouping the multiple machines” may include “the generated capability set, and capability parameters and status parameters,” and “the approval or selection of the user.” However, the ’518 Patent does not disclose what, if any, other information falls in or out of the scope of “information related to

grouping the multiple machines.” Without disclosures setting out the metes and bounds of “information related to grouping the multiple machines” beyond a limited, non-exhaustive set of examples, the ’518 Patent does not enable a POSITA to determine the scope of the term with reasonable certainty.

Thus, the term “information related to grouping the multiple machines” is indefinite, and claim 17 is invalid.

***“generates a capability set required to execute a user command” (Claim 18).***

Claim 18 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the term “generates a capability set required to execute a user command” in light of the specification and prosecution history of the ’518 Patent. This claim term/phrase did not have a known, generally accepted meaning in the art.

The ’518 Patent’s disclosures regarding the limitation are limited to the fact that a “capability set” is “generat[ed]”; the ’518 Patent provides no disclosure of how the “capability set” is generated, or what the metes and bounds of “capability set” are. Particularly, the ’518 Patent discloses “there is provided a method for operating a relation server, the relation server managing relations between machines, including generating, by the relation server, a capability set required to execute a command by analyzing the command.” ’518 Patent at 1:52-55; see also *id.* at 2:52-62, 5:56-60, 9:12-17, 10:33-39. Notably, the ’518 Patent does not disclose what analysis is performed on the command, nor does it describe how that analysis is used to generate the capability set. These disclosures that provide no information on how the “capability set” may or must be “generate[d]” do not enable POSITA to determine with reasonable certainty the scope of the term. The ’518 Patent’s description of “capability set” is vague. For example, the ’518 Patent discloses that “the term ‘capability set’ may be used as a concept having a level which is equivalent to the

task. For example, work, that is, a capability set corresponding to a task, such as housework, may be composed of processes (or functions) such as ‘cleaning,’ ‘doing the dishes,’ and ‘doing the laundry.’ Id. at 8:1-6. While this provides some context as to the meaning of a task, a process, and a function in the context of the ’518 Patent, it provides no disclosure or information to guide a POSITA with respect to the scope of the claimed “capability set.”

Accordingly, a POSITA would not be able to determine with reasonable certainty the scope of the term “generates a capability set required to execute a user command,” the term is indefinite, and claim 18 is invalid.

***“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” (Claim 18).***

Claim 18 (and all claims that depend therefrom) is indefinite because a POSITA would not be able to determine with reasonable certainty the scope of the term “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” in light of the specification and prosecution history of the ’518 Patent. This claim term/phrase did not have a known, generally accepted meaning in the art.

As explained above, the ’518 Patent does not enable a POSITA to determine with reasonable certainty the scope of the claim terms “task processing schedule parameter,” “status parameter,” “capability set,” or “capability parameter,” and the terms are thus indefinite. For the same reasons that the terms “task processing schedule parameter,” “status parameter,” “capability set,” and “capability parameter” are indefinite, the term requiring “generat[ing]” the “task processing schedule parameter,” “status parameter,” or “capability parameter” is indefinite.

Moreover, the specification of the '518 Patent is devoid of information that would guide a POSITA in determining the scope of what it means to to generate a task processing schedule parameter “according to” these other indefinite claim terms.

Accordingly, this term/phrase is indefinite, and claim 18 is invalid.

#### **IV. DISCLOSURES PURSUANT TO P.R. 3-4**

Defendants’ Patent Local Rule 3-4(a) document production can be found at AMZ\_KAIFI\_00003726 - AMZ\_KAIFI\_00048949. Defendants Local Rule 3-4(b) document production can be found at AMZ\_KAIFI\_00048950 - AMZ\_KAIFI\_00068331. Certain of these documents have been designated under the terms of the Protective Order.

Dated: January 16, 2025

Respectfully submitted,

HUESTON HENNIGAN LLP

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**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the above and foregoing document has been served on all counsel of record via email on January 16, 2025.

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