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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of
Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

As the below named inventor, I hereby declare that:

This declaration
is directed to:☐

The attached application, or

☒United States application or PCT international application number 14147190filed on 03-JAN-2014

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

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LEGAL NAME OF INVENTOR

Inventor: Aaron Phillips

Date (Optional): _____

Signature: Aaron Phillips

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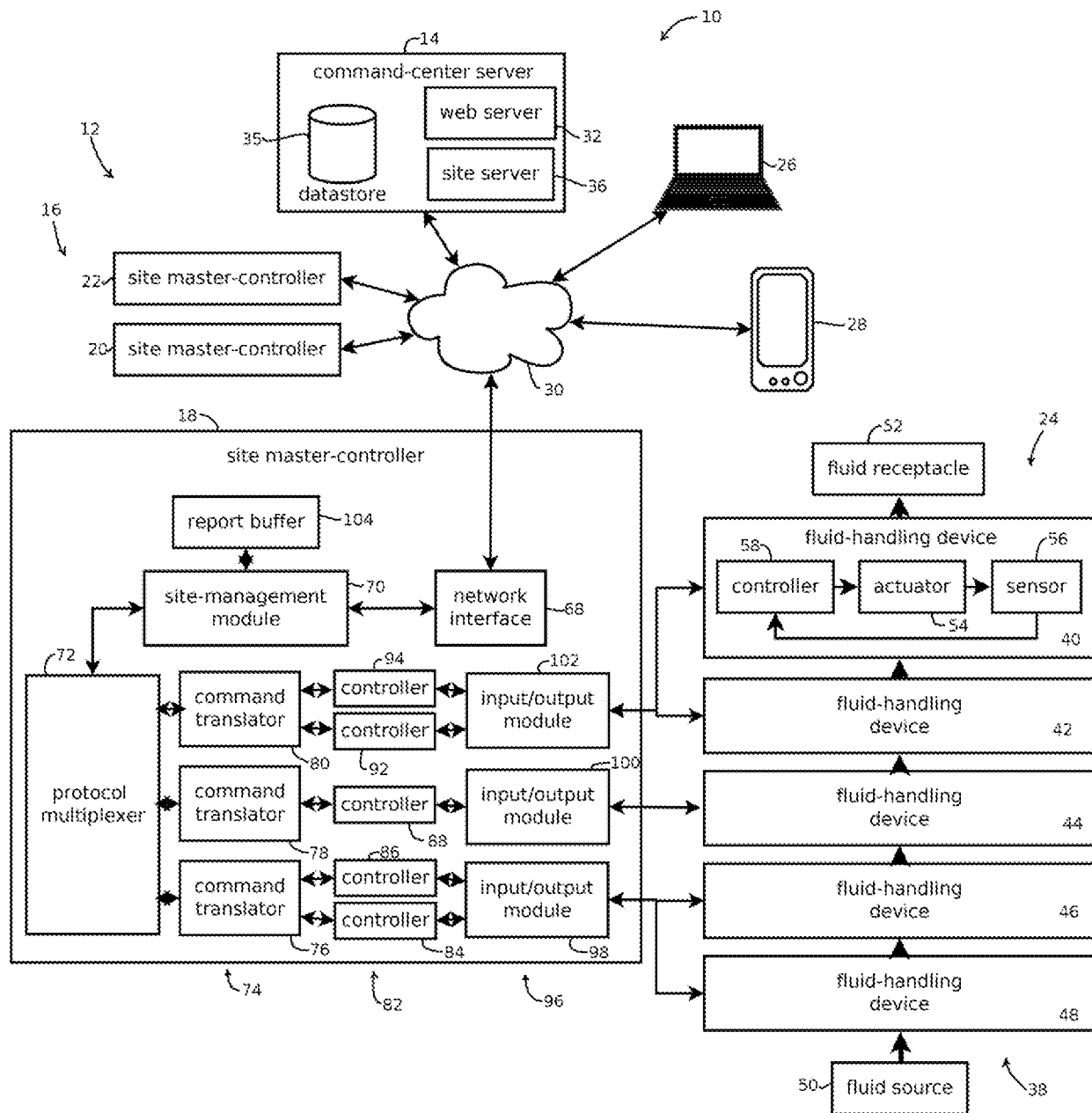


FIG. 1

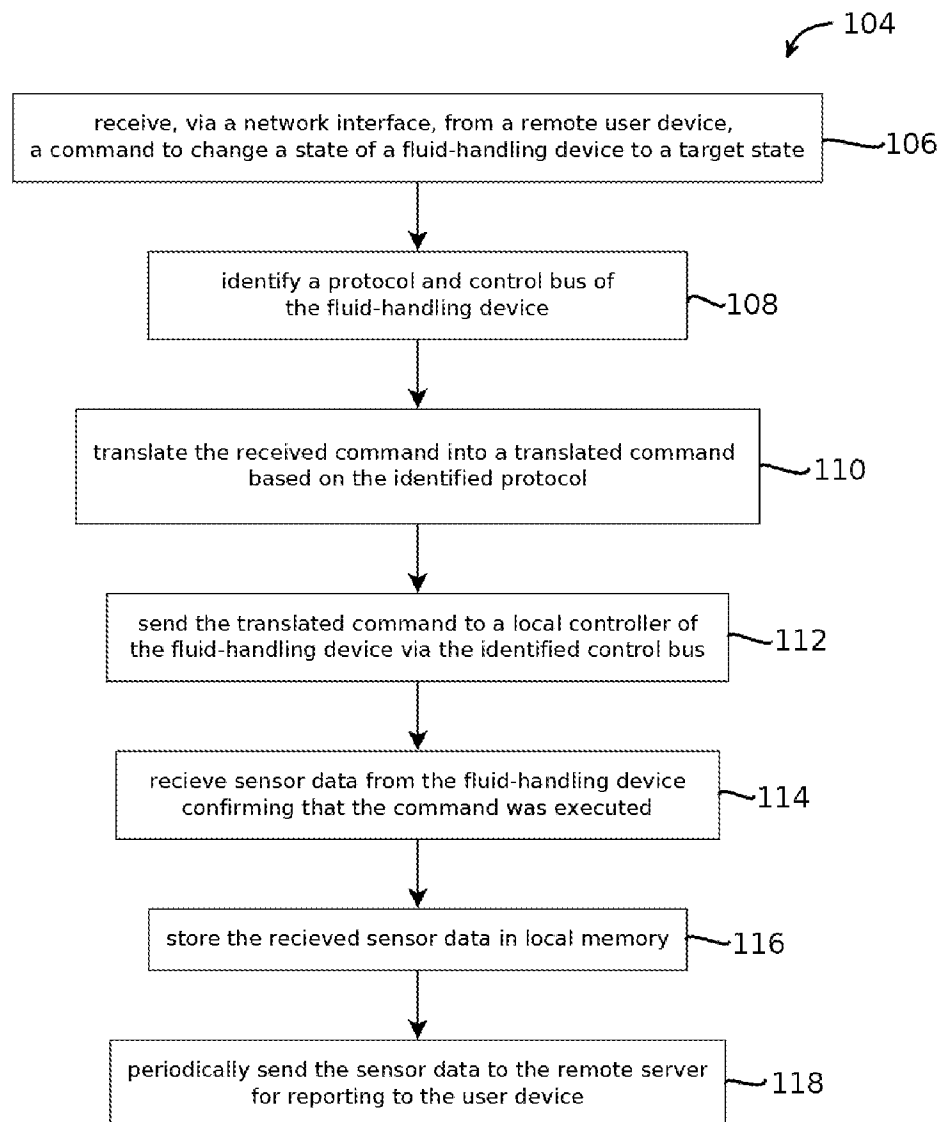


FIG. 2

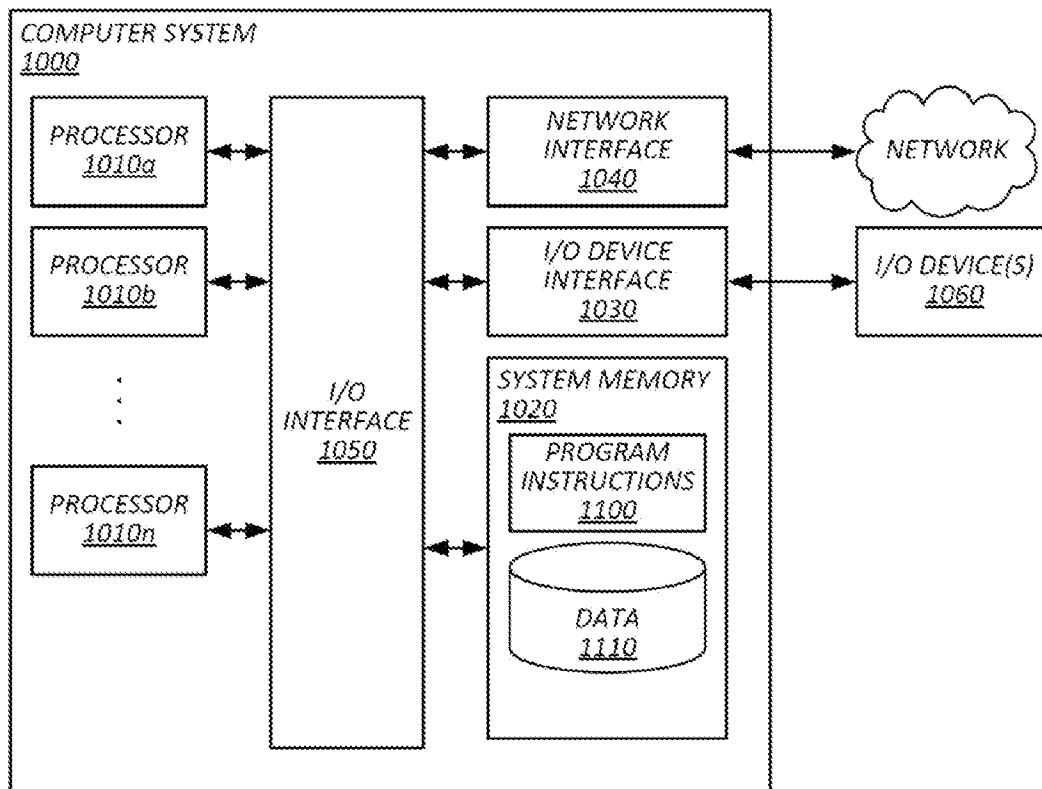


FIG. 3

PATENT APPLICATION

REMOTE CONTROL OF FLUID-HANDLING DEVICES

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application is a continuation of U.S. Patent Application 18/212,131, filed 20 June 2023, titled REMOTE CONTROL OF FLUID-HANDLING DEVICES, which is a continuation of U.S. Patent Application 17/681,373, issued as U.S. Patent 11,726,504, filed 25 February 2022, titled REMOTE CONTROL OF FLUID-HANDLING DEVICES, which is a continuation of U.S. Patent Application 17/513,539, issued as U.S. Patent 11,294,403, filed 28 October 2021, titled REMOTE CONTROL OF FLUID-HANDLING DEVICES. U.S. Patent Application 17/513,539 is a continuation of 16/656,319, issued as U.S. Patent 11,175,680, filed 17 October 2019, titled REMOTE CONTROL OF FLUID-HANDLING DEVICES, which is a continuation of U.S. Patent Application 15/867,077, issued as U.S. Patent 10,488,871, filed 10 January 2018, and titled REMOTE CONTROL OF FLUID-HANDLING DEVICES, which is a continuation of U.S. Patent Application 14/984,422, issued as U.S. Patent No. 9,898,014, filed 30 December 2015, and titled REMOTE CONTROL OF FLUID-HANDLING DEVICES, which is a continuation of U.S. Patent Application 14/147,190, issued as U.S. Patent 9,342,078, filed 03 January 2014, titled REMOTE CONTROL OF FLUID-HANDLING DEVICES, which is a continuation of U.S. Patent Application 13/708,557, issued as U.S. Patent 8,649,909, filed 07 December 2012, and titled REMOTE CONTROL OF FLUID-HANDLING DEVICES, the entire contents of each of which are hereby incorporated by reference for all purposes.

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0002] The present invention relates generally to fluid-handling devices and, more specifically, to remote control of fluid-handling devices.

2. Description of the Related Art

[0003] Fluid-handling devices, such as valves, pumps, and various other forms of process equipment, in many use cases, are widely geographically distributed. For example, when such devices are used to extract petroleum products from an oil well, the associated fluid source or receptacle may be in a relatively remote location, as oil wells are generally distributed relative to one another and located remote from metropolitan areas. Similar issues arise in relation to petro-water disposal facilities, re-injection facilities, and petroleum pumping stations, all of which tend to be geographically distributed and include fluid-handling equipment.

[0004] When monitoring or controlling such sites, it can be time-consuming and expensive for a technician to manually adjust or otherwise control fluid-handling devices, as the technician will incur costs and delays by traveling to the device to make adjustments or gather data in person. And these adjustments and inspections often occur relatively frequently, as process conditions and market demand fluctuate, thereby further increasing costs.

[0005] Some systems exist for exercising remote monitoring of fluid-handling devices, such as various supervisory control and data acquisition (SCADA) systems, but many of these systems fail when a network connection is lost. Remote logic controlling such systems generally ceases to exercise control when the remote logic is disconnected in the event of a network failure. Further, some SCADA systems require the installation of special-purpose software on a computing device in order to exercise control remotely, which tends to deter users from exercising remote control of fluid-handling devices due to the burden of configuring each computer from which remote control is exercised.

SUMMARY OF THE INVENTION

[0006] The following is a non-exhaustive listing of some aspects of the present techniques. These and other aspects are described in the following disclosure.

[0007] In some aspects, the present techniques include a system for remotely controlling fluid-handling device of an oil well, a petro water disposal or re-injection facility, or a petroleum pumping station, the system including: an input/output module operable to communicate with a fluid-handling device; a network interface; memory; and one or more processors communicatively

coupled to the input/output module, the network interface, and the memory, wherein the memory stores instructions that when executed by the processors cause the processors to effectuate steps including: receiving, via the network interface, from a remote user device, a command to change a state of the fluid-handling device to a target state; translating the received command into a translated command operative to cause a local controller of the fluid-handling device to drive the fluid-handling equipment to the target state, the local controller being responsive to the command and feedback from the fluid-handling device indicative of whether the fluid-handling device is in the target state; and sending the translated command to the local controller..

[0008] Some aspects include a tangible, non-transitory machine-readable medium storing instructions that when executed by a data processing apparatus cause the data processing apparatus to perform operations including: receiving, via the network interface, from a remote user device, a command to change a state of the fluid-handling device to a target state; translating the received command into a translated command operative to cause a local controller of the fluid-handling device to drive the fluid-handling equipment to the target state, the local controller being responsive to the command and feedback from the fluid-handling device indicative of whether the fluid-handling device is in the target state; and sending the translated command to the local controller.

[0009] Some aspects include a process, including: receiving, via the network interface, from a remote user device, a command to change a state of the fluid-handling device to a target state; translating the received command into a translated command operative to cause a local controller of the fluid-handling device to drive the fluid-handling equipment to the target state, the local controller being responsive to the command and feedback from the fluid-handling device indicative of whether the fluid-handling device is in the target state; and sending the translated command to the local controller.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The above-mentioned aspects and other aspects of the present techniques will be better understood when the present application is read in view of the following figures in which like numbers indicate similar or identical elements:

[0011] Figure 1 illustrates an example of a command-center server and site master-controller in accordance with some embodiments;

[0012] Figure 2 illustrates an example of a process by which remote control of fluid-handling devices is exercised in accordance with some embodiments; and

[0013] Figure 3 illustrates an example of a computing device by which the hardware and processes of Figures 1 and 2 may be implemented.

[0014] While the invention is susceptible to various modifications and alternative forms, specific embodiments thereof are shown by way of example in the drawings and will herein be described in detail. The drawings may not be to scale. It should be understood, however, that the drawings and detailed description thereto are not intended to limit the invention to the particular form disclosed, but to the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the present invention as defined by the appended claims.

DETAILED DESCRIPTION OF CERTAIN EMBODIMENTS

[0015] Figure 1 illustrates a computing environment 10 having a control system 12 that, in some implementations, addresses some or all of the above-mentioned deficiencies in certain SCADA systems for exercising remote control of fluid-handling devices. As explained in greater detail below, the control system 12 of this embodiment includes a command-center server 14 and site master-controllers 16 (specifically, in this example, three such site master-controllers 18, 20, and 22) that cooperate to facilitate remote control at a fluid-handling site 24 from user devices 26 or 28 via the Internet 30. Each site master-controller 16 may be co-located with a corresponding fluid-handling site 24 and, in some embodiments, may include logic that implements remotely issued commands, such that once a command is issued from user devices 26 or 28 and received at a site master-controller 16, the site master-controller 16, in some embodiments, executes the command to completion, even if Internet access is lost before the command is fully executed. Further, the site master-controller 16 of some embodiments may be operative to translate commands into various device-specific protocols, such that a single implementation of the site master-controller 16 is relatively versatile regardless of the type of fluid-handling device being controlled. And in

some implementations, the command-center server 14 may be operative to present a command interface and receive commands via a web interface in a web browser on user devices 26 and 28, such that fluid-handling devices can be controlled remotely without the need to install special-purpose software on the computing device through which remote control is exercised. It should be noted, however, that not all embodiments provide all of these benefits, as various engineering and cost trade-offs are envisioned, and some embodiments may provide other or none of these benefits.

[0016] In some embodiments, the command-center server 14 includes a web server 32, a data store 34, and a site server 36. The command-center server 14 may act as a central node through which any of a plurality of user devices, such as user devices 26 and 28 (e.g., laptops, tablets, desktop computers, smartphones, and the like), issue commands to any of a plurality site master-controller 16, provided that such access is authorized. Only two user devices and three site master-controllers are shown for simplicity of explanation, but implementations including substantially more of each are envisioned, such as more than several hundred or several thousand user devices and more than several hundred or several thousand site master-controllers, for example. That said, embodiments are also consistent with a single user device and a single site master-controller.

[0017] The illustrated web server 32 may be operative to send instructions to present a control interface on the user devices 26 and 28, for example in a web browser on an operating system executed by processors and stored by memory of the user devices 26 or 28. The web server 32 may be operative to receive a request for such an interface from one of the user devices 26 or 28, send instructions (for example HTML JavaScript, and cascading stylesheets) to the user devices 26 that when rendered in a browser of the user devices 26 or 28, presents the control interface. The control interface may include buttons, text-input fields, and the like, that when interacted with by a user (e.g., touching, clicking, keying in text, and the like) generated events handled by the control interface and which cause corresponding commands to be sent from the user devices 26 or 28 to the command-center server 14. Other embodiments may have a special-purpose application executing on the user devices 26 and 28 for presenting the control interface and sending commands to the command-center server 14, e.g., a smartphone app that communicates via a web-based application program interface. The command-center server may interact with the user devices 26 and 28 via an Internet Protocol (IP) address of the command-center server and a port, such as port 80, which may be different from a port by which the command-center server 14 communicates

with the various site master-controller 16, as described below, to keep traffic from the different components separate.

[0018] The web server 32 may also be operative to send instructions to present reports, and interfaces by which such reports are selected, to the user devices 26 or 28 responsive to user requests for such information or interfaces. As explained in greater detail below, the site master-controller 16 may report various process data, and the web server 32 may present this process data to users upon request. This process data may be stored in the data store 34.

[0019] In the data store 34 of some embodiments, the site master-controllers 16 may be organized according to user accounts, with each site master-controller 16 corresponding to at least one user account and some user accounts corresponding to multiple site master-controllers 16, as some users may have, for example, a plurality of oil wells or other facilities which the user wishes to control or monitor. In some embodiments, the data store 34 includes a plurality of account records, each account record having one or more user names, one or more user passwords, billing information (e.g., billing address, subscription price, and invoicing data), and identifiers of one or more site master-controllers (e.g. an IP address of each site master-controller) with which users under the corresponding account are authorized to interact (e.g., issue commands or view reports of data from the site master-controller). The data store 34 may encode such arrangements of data in a variety of formats, including a relational database, program state, hierarchical key-value pairs, a flat file, or other information encoded in a tangible, non-transitory, machine-readable medium, such as a hard drive or random access memory.

[0020] The illustrated site server 36 may be operative to interface between the command-center server 14 and the site master-controllers 16 by directing commands received via the web server 32 to the site master-controller 16 to which the command is addressed and receiving process data from the respective site master-controllers to be stored in the data store 34 or presented to the users via the web server 32. In some embodiments, the site server 36 is operative to receive a command via the web server 32, identify an IP address of the site master-controller 16 to which the command is addressed, and send the command to the respective site master-controller 16, for example via an IP address of the command set center server (which may be the same as that of the web server 32

or different) and via a port of the command-center server 14 (which may be different from a port used for the web server 32, or some embodiments may use the same port).

[0021] The data store 34, web server 32, and site server 36 may be co-located, for example in a single computing device, or these components 32 and 34 may be distributed across a number of computing devices, either co-located or physically distributed. The web server 32 and site server 36 may be operative to issue queries to the data store 34 to implement requests from the user devices 26 or 28, and the web server 32 may communicate with the site server 36 to effectuate commands.

[0022] In some embodiments, each site master-controller 16 controls a respective fluid-handling site 24 (only one of which is shown for site master-controller 18, though each of the other site master-controllers 20 and 22 may be associated with their own, differently located fluid-handling site, or some sites may have multiple site master controllers). The site master-controller 16 may receive commands from the command-center server 14 and implement those commands to completion, for example without further feedback to, and control signals from, the command-center server 14, such that the command can be executed even if a network connection to the command-center server 14 is temporarily lost. Further, the site master-controller 16 may be operative to report process data to the command-center server 14 for storage in the data store 34 and presentation via the web server 32 on user devices 26 and 28.

[0023] In some embodiments, the site master-controllers 16 are physically located at an associated fluid-handling site 24. For example, the site master-controller 18 may be connected to the fluid-handling site via a private network through which communications are sent without passing through the public Internet, and in some cases, the site master-controller 18 may be within a mile of the fluid-handling site 24, to give one example of co-location. The site master-controllers 16 may be geographically remote from one another, the command-center server 14, and the user devices 26 and 28 (each of which may also be remote from one another). For example, each of these components may be more than 1 mile from one another or not connected to one another via a private network. In some cases, though, some sites may have multiple site master-controllers co-located at a single site or some user devices may be co-located.

[0024] To execute commands at the fluid-handling site 24, the site master-controller 18 translates the received commands into a protocol appropriate for a corresponding fluid-handling device 38 (identified individually by reference numbers 40, 42, 44, 46, and 48). Accordingly, the features of the fluid-handling site 24 are described before addressing internal components of the exemplary site master-controller 18 to explain the environment in which the site master-controller 18 operates.

[0025] In this embodiment, the fluid-handling site 24 includes a plurality of fluid-handling devices 38 that are fluidly coupled to a fluid source 50 or a fluid receptacle 52, such that fluids (e.g., liquids or gases) can flow to, from, or through the respective fluid-handling device 38. The illustrated embodiment includes five fluid-handling devices, but other embodiments may include different numbers of such devices coupled to the various site master-controllers 16.

[0026] The fluid-handling devices may be any of a variety of different types of devices that handle fluids. For example, the fluid-handling devices may be a valve, a pump, a process chamber (for instance a oil/water separation tank), or a process filter, or level switch. In some cases, the fluid-handling device may include an actuator, for instance an electric motor or a hydraulic drive, by which fluid flow or other parameters are manipulated, a sensor 56 by which process parameters are measured, or a local controller 58 by which power to the actuator 54 is modulated. Fluid-handling devices 38 may include a variety of types of sensors, for instance, a temperature, viscosity, flowrate, fluid level, pressure, conductivity, or other parameter sensor.

[0027] The illustrated fluid-handling device 40 is shown with feedback control of the actuator 54 by the local controller 58 based on measurements from the sensor 56, but other embodiments may include an actuator with feed-forward control, including actuators controlled by an on-off switch without sensor feedback. The local controller 58 may be operative to receive a command to drive the actuator 54 from a current setpoint to a target setpoint and control the flow of power (e.g. hydraulic or electric power) to the actuator 54 to implement the requested change of state. For instance, the controller 58 may receive a command to change a speed, pressure, or flowrate of a pump and may respond by increasing or decreasing a flow of electric or hydraulic power to an electrical or hydraulic motor driving such a pump. Or the controller 58 may receive a command to

open or close a valve and, in response, may increase or decrease a flow of electric or hydraulic power to a corresponding actuator that opens or closes the valve.

[0028] In some cases, the local controllers 58 may have relatively limited processing power, such that more complicated changes in state are executed responsive to multiple commands to the respective fluid-handling device 38. For example, a fluid-handling device 38 with feed-forward control may receive a command to adjust to a target setpoint, return sensor data to the site master-controller 18, and received a subsequent command to adjust further based on a determination made by the site master-controller 18 based on the sensor data. In another example, a stuck-valve may be loosened by a series of commands issued from the site master-controller 18 causing a local controller 58 to oscillate between states, working the stuck-valve loose. Similarly, shocks to up-stream or down-stream fluid-handling devices may be mitigated by a series of commands gradually changing the state of a given fluid-handling device, for instance gradually ramping up or down the speed of a pump or gradually opening or closing a valve. In some embodiments, an action that affects the system, yet originates from outside the system, may use logic from a controller in the local system, such as a relatively drastic or rapid reduction in a specific tank level, which may indicate that a leak in a tank may exists, and the outside logic may provide which tank is experiencing the leak.

[0029] The site master-controller 18, in some embodiments, communicates with the fluid-handling devices 38 via a plurality of control buses 60 (individually labeled as 62, 64, and 66). Each control bus 60 may be operative to convey commands to one or more of the fluid-handling devices 38 using a different protocol. In this example, control bus 66 communicates with fluid-handling devices 42 and 40, control bus 64 communicates with fluid-handling device 44, and control bus 62 communicates with fluid-handling devices 46 and 48, but this arrangement is merely exemplary, and other embodiments may include more or fewer control buses, more or fewer fluid-handling devices per control bus, and more or fewer control buses per fluid-handling device. The control buses 60 may be serial or parallel control buses conveying digital or analog signals.

[0030] In one particular implementation, intended to serve merely as an example, the control bus 66 conveys commands and data using a serial communication protocol, such as the Modbus remote terminal unit (RTU) protocol, in which commands and other data are encoded in binary signals

packaged in frames having redundant bits for detecting errors. The fluid-handling devices 40 and 42 on the bus 66, in this example, each have a unique address on the bus 66 by which commands from the site master-controller 68 are addressed to specific fluid-handling devices 40 or 42, and these addresses may be stored in memory of the site master-controller 18 as described in greater detail below. In some examples, site master-controller 18 acts as a master device on the bus 66, controlling which devices are permitted to transmit signals on the bus 66 at a given point in time. In this example, the fluid-handling devices 42 and 40 may include a bus interface that detects when a command is addressed to the respective fluid-handling device and stores the command for further processing, for example by a local controller 58 that implements the command. For example, fluid-handling device 40 may be a pump, and the bus 66 may convey commands to the local controller 58 to increase the speed of the actuator 54, for example an electric motor speed, to increase a pumping flowrate or pressure. In another example, the site master-controller 18 may issue a command on bus 66 to fluid-handling device 40 to return a value sensed by sensor 56, for example a measured pump speed, pressure, or flowrate.

[0031] In another aspect of this particular exemplary implementation, the bus 64 conveys a single value, for example a binary on/off value encoded in a voltage or current, or an analog control signal, encoded in a current or voltage, to one fluid-handling device 44 via a single wire (or pair of wires, if a reference different from ground is used). In some cases, the value may be a voltage ranging from 0 to 5 V, or some other range, in which a relatively low voltage, below a threshold, corresponds to an off signal, and a relatively high voltage, above a threshold, corresponds to an on signal. In some cases, the same command may be conveyed to multiple fluid-handling devices connected in series or parallel, or multiple commands may be conveyed by multiple wires in parallel to a single fluid-handling device or multiple fluid-handling devices, for instance one on-off signal per fluid-handling device. As explained in greater detail below, one or more instances the bus 64 may connect to a data acquisition board of the site master-controller 18 for manipulating voltage or current to encode commands. In one example, the bus 64 conveys a binary value to a local controller for a valve actuator as a voltage-high or voltage-low signal, commanding the valve to open or close, respectively. In some cases, instances of the bus 64 may also return data to the site master-controller 18, for example as an analog signal indicating the state of a sensor. In some embodiments, instances of the bus 64 may connect to sensors on fluid-handling devices that are

also connected to the bus 66 or the bus 62, e.g., returning sensor values, while the other buses convey commands.

[0032] In another aspect of this particular exemplary implementation, the bus 62 is an Ethernet bus, forming a private local area network by which the site master-controller 18 communicates with fluid-handling devices 46 and 48 via the Ethernet protocol. Examples of various forms of constraints and set point targeting that might be implemented with such communication are described below with reference to local controllers. In this example, data is conveyed in frames of binary data, and each of the site master-controller 18 and the fluid-handling devices 46 and 48 are associated with a respective network address that, when included in such a frame, indicates that the frame is addressed to the associated device. Frames may include redundancy to detect corrupted frames, and access to the bus 62 may be controlled in a distributed fashion, by each device sensing whether a transmission by the device caused a collision on the bus 62, e.g., using carrier-sense multiple-access techniques with collision detection. In this example, fluid-handling devices 46 and 48 may include network interfaces, such as network interface cards or integrated devices that detect frames addressed to the corresponding fluid-handling device 46 or 48, capture the frames, and store commands encoded in the frames (e.g., in a buffer) for subsequent processing by a local controller. Similarly, the fluid-handling devices 46 and 48 may return data to the site master-controller 18, for example data from sensors of the fluid-handling devices, using the Ethernet protocol.

[0033] As noted above, the site master-controller 18, in this embodiment, like the other site master-controller 20 and 22, is operative to receive commands from the command-center server 14 and translate those commands in accordance with both protocols of the respective buses 62, 64, or 66 and command formats supported by the fluid-handling devices 38 (e.g., command codes, on-off signals, application-program interfaces, and the like, depending on the device). To this end, in this embodiment, the site master-controller 18 includes a network interface 68, a site management module 70, a protocol multiplexer 72, command translators 74 (individually labeled as 76, 78, 80), controllers 82 (individually labeled as 84, 86, 88, 90, 92, and 94), and input/output modules 96 (individually labeled as 98, 100, and 102). The site master-controller 18 may also include a report buffer 104 that stores data to be reported back to the command-center server 14.

[0034] The illustrated network interface 68 is operative to communicate with the command-center server 14 via the Internet 30 (e.g., via the Internet and other networks, such as a local area network, a cellular network, or the like). In some embodiments, the site management module 70 communicates with the network interface 68 via application program interfaces of an operating system in which the site master-controller 18 is executed.

[0035] The illustrated site-management module 70 is operative to coordinate the operation of the other components of the site master-controller 18. In some cases, the site management module 70 monitors a network socket defined by an Internet protocol address and port of the site master-controller 18 and handles events, e.g., incoming commands, from the network socket. In some embodiments, the site-management module 70 is implemented with multiple threads, in a system in which one thread sends and receives data request; one thread controls and monitors the current state of the system, causing other threads to be synced with current information; one thread writes to writeable devices (e.g., devices having memory) to set the target state of each device; one thread that handles server interaction for updating and receiving; one thread that handles user interaction (e.g., presenting interfaces on an local display, receiving user input, and handling events from such input); and one thread that eliminates threads that become problematic.

[0036] The site manager module 70 may also be operative to transmit data with the network socket, using the network interface 68, to the command-center server 14. For example, the site manager module 70 may periodically retrieve data from the report buffer 104, such as alarms, measurements from sensors, and other data associated with the fluid-handling site 24, and push this data to the command-center server 14. Or the site management module 70 may be operative to receive requests for such data being pulled from the command-center server 14, and retrieve the corresponding data from the report buffer 104 for transmission back to the command-center server 14. Further, the site manager module 70 may be operative to request measurements, alarms, and other data from the fluid-handling devices via the components 72, 74, 82, and 96, and store this data in the report buffer 104 for transmission to the command-center server 14.

[0037] In this embodiment, when the site management module 70 receives a command via the network interface 68, or issues its own command (e.g., to poll sensors or alarm logs), the command is conveyed to a protocol multiplexer 72, which may be operative to determine which control bus

60 and fluid-handling device 38 will receive a corresponding translated command. For example, the protocol multiplexer 72 may store in memory records for communicating with the fluid-handling devices 38. Each record may correspond to a individual fluid-handling device 38 or an individual actuator or sensor of a fluid-handling device, and each record may include a unique identifier of the corresponding device, actuator, or sensor; a control bus address of the device, actuator, or sensor (for those components on a control bus that is addressable); an identifier of the control bus 62, 64, or 66 through which the site master-controller 18 communicates with the device, actuator, or sensor; and an identifier of the protocol through which such communication occurs.

[0038] When a command is received at the protocol multiplexer 72, in some embodiments, the command includes the identifier of the device, actuator, or sensor to which the command is directed, and using this identifier, the protocol multiplexer 72 retrieves the corresponding record from memory to identify the appropriate protocol. In this example, based on the protocol in the record, the protocol multiplexer 72 selects among the command translators 74, each of which corresponds to a different protocol. For example, the command translator 80 may correspond to a protocol of control bus 66, such as the modbus RTU protocol; the command translator 78 may corresponds to a protocol of the control bus 64, such as a binary or analog voltage or current signal conveyed via a data acquisition board; and the command translator 76 may corresponds to a protocol of the control bus 62, such as the Ethernet protocol.

[0039] The command translators 74 may be operative to translate a received command from an input format to a format configured to effectuate changes in the fluid-handling devices 38. For instance, a generic command to open a valve may be sent from the control-center server 14, and that command may be translated to differently depending on the specific protocol used to communicate with the corresponding valve at a given site, with different sites potentially employing different protocols for the task. Translating commands may abstract the details of the site-specific implementations away from those implementing the command-center server 14, facilitating relatively rapid deployment of new features or sites.

[0040] In one example of translation, the command translator 80 may receive a command to increase a pump speed, and the command translator may determine a corresponding command via

calculation or look-up table, such as a modbus function code and associated data, that when conveyed via the control bus 66 causes a corresponding fluid-handling device 40 or 42 to change state. In some embodiments, prior to execution, the command is checked for validity, to ensure the current conditions of the system warrant that the commanded action occur to preventing harm to the fluid-handling devices.

[0041] For example, some embodiments may store in memory accessible to the command translator 80 system constraints describing acceptable patterns of input and output parameters. The system constraints may be selected to prevent damage to the system, e.g., a maximum speed for a pump, a maximum or minimum liquid height for a tank, a maximum or minimum fluid pressure, a maximum or minimum flow rate, an impermissible pattern of open valves that would leak oil outside of the system, etc. A command may be compared against these constraints to determine whether the command would cause the system to violate one of the constraints. In response to determining that the command would violate a constraint, the command may be rejected, an override confirmation may be requested from the operator, or the command may be executed to the extent permitted by the constraints, for instance.

[0042] Some embodiments may execute the translated commands in different modes. For instance, in an automatic mode, the command translator 80 may select set points to keep the system within the above-described constraints, execute a process recipe in which a collection of set points are targeted, or to target other output set points given the above described constraints. In another example, the system may operate in a mixed automatic mode in which the user selects which devices are manually controlled while other devices are automatically controlled. In a third example, a manual mode, each of the devices may be controlled manually.

[0043] In another example, the command translator 78 may be operative to determine whether a command corresponds to a particular voltage or current on an individual instance of the control bus 64. For example, a command to dislodge a stuck valve may be translated by the command translator 78 into a sequence of on and off signals conveyed via a high and low voltage on an individual wire corresponding to bus 64.

[0044] In another example, the command translator 76 may be operative to translate commands into a format configured to change the state of fluid-handling devices 46 or 48. Or in some

embodiments, command translator 76 is operative to pass through and un-translated command if appropriately formatted as received from the command-center server 14.

[0045] Some embodiments may include controllers 82 operative to execute control routines implicated by the translated commands on an individual device 38, actuator 54, or sensor 56. To this end, the commands translator 74, in addition to transmitting commands, may also route the translated command to a controller 82 corresponding to the specific device, actuator, or sensor to which the command is directed. The controllers 82 may determine set points corresponding to (or conveyed in) the command, send control signals configured to drive the fluid-handling device to the set points, and receive feedback from the fluid-handling device 38 indicative of whether the fluid-handling device 38 has achieved the target set point. In some embodiments, the controllers 82 include proportional-integral-derivative controllers for exercising feedback control, or the controllers 82 may include feed forward control algorithms (e.g., look-up tables or formulas for calculating commands based on set points). Further, in some embodiments, the controllers 82 may change the set point over time in accordance with the received command, for example a command to gradually ramp up a motor speed, a command to gradually open a valve, or a command to oscillate the position of a valve to dislodge a stuck valve. Algorithms for changing the set point may be stored in memory accessible to the controllers 82 responsive to a translated command implicating the specific algorithm.

[0046] The illustrated input/output modules 26 include, in some embodiments, link-layer devices that accommodate the particular features of the physical medium with which control buses 62, 64, and 66 are implemented. In some cases, the input/output modules 96 also perform encoding and decoding at the network and transport layer, for example packaging data in appropriately structured frames for the respective control bus 60. In one example, the input/output module 102 includes a modbus modem, the input/output module 100 includes a data acquisition board (for example a printed circuit board having one or more digital-to-analog converters or analog-to-digital converters), and the input/output module 98 includes an Ethernet network interface card.

[0047] The site master-controller 18, thus, may be operative to receive commands from the site server 36 of the command-center server 14, translate those commands, identify the appropriate control bus 60 and, if needed, address on the control bus, and implement the command once

received, even if network access is lost after the command is issued from the command-center server 14. Further, the site master-controller 18, in some embodiments, is operative to retrieve sensor data, alarms, and other site data, and buffer such data in the report buffer 104, before the data is periodically returned to the command-center server 14, such that buffered data is not lost if network access ceases intermittently. Accordingly, some embodiments provide control and monitoring of remote fluid handling sites 24 that is relatively robust to interruptions in network service, and some embodiments facilitate such monitoring and control via a web browser on user devices 26 and 28, such that the addition of new devices or users is relatively simple compared to systems that require special purpose applications. Again though, not all embodiments provide these benefits, and some embodiments may provide other benefits.

[0048] The components of the site master-controller 18 and command-center server 14 are described above with reference to discrete functional blocks and as discrete unitary components, but it should be understood that software or hardware by which these functional blocks or components are implemented may be distributed across multiple computing systems or multiple processes within a computing system, and code, stored in a tangible, non-transitory, machine-readable medium, for providing this functionality or the functionality described below may be intermingled, conjoined, divided, or otherwise differently organized than the manner in which the functional blocks are illustrated.

[0049] Figure 2 illustrates an embodiment of a process 104 for exercising remote control of a fluid-handling site. The process 104 may be performed by the above-described site master-controllers 16, though embodiments are not limited to the implementations described above. Further, embodiments may include additional steps, fewer steps, and steps in a different order from the manner in which the process 104 is illustrated, which is not to suggest that any other feature described herein is required in all embodiments or cannot be modified.

[0050] In some embodiments, the process 104 includes receiving, via a network interface, from a remote user device, (e.g., via a command-center server) a command to change a state of a fluid-handling device to a target state, as illustrated by block 106. The command may be received from, for example, the above-describes site server 36, which may have received the command from a remote user device via a web browser of the user device. Further, the command to change the fluid-

handling device to a target state may include a command that changes the fluid-handling device to a plurality of different states over time, such as a command to ramp up or down a motor speed or oscillate some parameter.

[0051] In some embodiments, the process 104 includes identifying a protocol and control bus of the fluid-handling device, as illustrated by block 108. Identifying a protocol and control bus may include parsing an identifier of a device, actuator, or sensor from the received command and retrieving a corresponding record based on the identifier, the record including an identifier of the protocol and control bus. In some embodiments, the retrieved record may also include an identifier of a control bus address of the corresponding device, actuator, or sensor.

[0052] In some embodiments, the process 104 includes translating the received command into a translated command based on the identified protocol, as illustrated by block 110. Examples of such translation are described above with reference to the command translators 74.

[0053] The process 104 may also include sending the translated command to a local controller of the fluid-handling device via the identified control bus, as illustrated by block 112. Sending the translated command may include exercising feedback control of the fluid-handling device based on sensor data received from the fluid-handling device by adjusting a set point sent to the local controller. Or in some use cases, sending the translated command may include sending a sequence of set points that change over time.

[0054] In some embodiments, the process 104 includes receiving sensor data from the fluid-handling device confirming that the command was executed, as illustrated by block 114. As with the other features described herein, not all embodiments include this step. Using this data, some embodiments may exercise feedback control or may retrieve sensor measurements following the execution of a command for reporting to the user device. In some cases, the sensor data is retrieved regardless of whether a command was issued, for example periodically to monitor the state of the fluid-handling device. In one example, the fluid-handling device is an oil/water separation tank, and a set point of a pump is adjusted to change a fluid level in the tank, e.g., a level at which oil meets water or a level of the oil.

[0055] In some embodiments, the received sensor data is stored in local memory, as illustrated by block 116. For example, the received sensor data may be stored in the above-described report buffer 104.

[0056] In some embodiments, the process 104 further includes periodically sending the sensor data to the remote server for reporting to the user device, as illustrated by block 118. Periodically, data from the report buffer may be transmitted to the above-described command-center server 14 for compilation of reports requested by user devices 26 to 28. Similarly, alarms or other log data issued by fluid-handling devices may also be retrieved, stored, and transmitted to the command-center server 14 for reporting.

[0057] Thus, systems implementing the process 104, in some embodiments, offer relatively robust control and monitoring of fluid-handling devices that are geographically distributed. This is expected to lower the costs associated with operating such fluid-handling devices and facilitate the extraction of petroleum products and other processing of fluids.

[0058] Figure 3 is a diagram that illustrates an exemplary computing system 1000 in accordance with embodiments of the present technique. Various portions of systems and methods described herein, may include or be executed on one or more computer systems similar to computing system 1000. Further, processes and modules described herein may be executed by one or more processing systems similar to that of computing system 1000.

[0059] Computing system 1000 may include one or more processors (e.g., processors 1010a-1010n) coupled to system memory 1020, an input/output I/O device interface 1030 and a network interface 1040 via an input/output (I/O) interface 1050. A processor may include a single processor or a plurality of processors (e.g., distributed processors). A processor may be any suitable processor capable of executing or otherwise performing instructions. A processor may include a central processing unit (CPU) that carries out program instructions to perform the arithmetical, logical, and input/output operations of computing system 1000. A processor may execute code (e.g., processor firmware, a protocol stack, a database management system, an operating system, or a combination thereof) that creates an execution environment for program instructions. A processor may include a programmable processor. A processor may include general or special purpose microprocessors. A processor may receive instructions and data from a memory (e.g.,

system memory 1020). Computing system 1000 may be a uni-processor system including one processor (e.g., processor 1010a), or a multi-processor system including any number of suitable processors (e.g., 1010a-1010n). Multiple processors may be employed to provide for parallel or sequential execution of one or more portions of the techniques described herein. Processes, such as logic flows, described herein may be performed by one or more programmable processors executing one or more computer programs to perform functions by operating on input data and generating corresponding output. Processes described herein may be performed by, and apparatus can also be implemented as, special purpose logic circuitry, e.g., an FPGA (field programmable gate array) or an ASIC (application specific integrated circuit). Computing system 1000 may include a plurality of computing devices (e.g., distributed computer systems) to implement various processing functions.

[0060] I/O device interface 1030 may provide an interface for connection of one or more I/O devices 1060 to computer system 1000. I/O devices may include devices that receive input (e.g., from a user) or output information (e.g., to a user). I/O devices 1060 may include, for example, graphical user interface presented on displays (e.g., a cathode ray tube (CRT) or liquid crystal display (LCD) monitor), pointing devices (e.g., a computer mouse or trackball), keyboards, keypads, touchpads, scanning devices, voice recognition devices, gesture recognition devices, printers, audio speakers, microphones, cameras, or the like. I/O devices 1060 may be connected to computer system 1000 through a wired or wireless connection. I/O devices 1060 may be connected to computer system 1000 from a remote location. I/O devices 1060 located on remote computer system, for example, may be connected to computer system 1000 via a network and network interface 1040.

[0061] Network interface 1040 may include a network adapter that provides for connection of computer system 1000 to a network. Network interface may 1040 may facilitate data exchange between computer system 1000 and other devices connected to the network. Network interface 1040 may support wired or wireless communication. The network may include an electronic communication network, such as the Internet, a local area network (LAN), a wide area (WAN), a cellular communications network or the like.

[0062] System memory 1020 may be configured to store program instructions 1100 or data 1110. Program instructions 1100 may be executable by a processor (e.g., one or more of processors 1010a-1010n) to implement one or more embodiments of the present techniques. Instructions 1100 may include modules of computer program instructions for implementing one or more techniques described herein with regard to various processing modules. Program instructions may include a computer program (which in certain forms is known as a program, software, software application, script, or code). A computer program may be written in a programming language, including compiled or interpreted languages, or declarative or procedural languages. A computer program may include a unit suitable for use in a computing environment, including as a stand-alone program, a module, a component, a subroutine. A computer program may or may not correspond to a file in a file system. A program may be stored in a portion of a file that holds other programs or data (e.g., one or more scripts stored in a markup language document), in a single file dedicated to the program in question, or in multiple coordinated files (e.g., files that store one or more modules, sub programs, or portions of code). A computer program may be deployed to be executed on one or more computer processors located locally at one site or distributed across multiple remote sites and interconnected by a communication network.

[0063] System memory 1020 may include a tangible program carrier having program instructions stored thereon. A tangible program carrier may include a non-transitory computer readable storage medium. A non-transitory computer readable storage medium may include a machine readable storage device, a machine readable storage substrate, a memory device, or any combination thereof. Non-transitory computer readable storage medium may include, non-volatile memory (e.g., flash memory, ROM, PROM, EPROM, EEPROM memory), volatile memory (e.g., random access memory (RAM), static random access memory (SRAM), synchronous dynamic RAM (SDRAM)), bulk storage memory (e.g., CD-ROM and/or DVD-ROM, hard-drives), or the like. System memory 1020 may include a non-transitory computer readable storage medium may have program instructions stored thereon that are executable by a computer processor (e.g., one or more of processors 1010a-1010n) to cause the subject matter and the functional operations described herein. A memory (e.g., system memory 1020) may include a single memory device and/or a plurality of memory devices (e.g., distributed memory devices). In some embodiments, the program may be conveyed by a propagated signal, such as a carrier wave or digital signal conveying a stream of packets.

[0064] I/O interface 1050 may be configured to coordinate I/O traffic between processors 1010a-1010n, system memory 1020, network interface 1040, I/O devices 1060 and/or other peripheral devices. I/O interface 1050 may perform protocol, timing or other data transformations to convert data signals from one component (e.g., system memory 1020) into a format suitable for use by another component (e.g., processors 1010a-1010n). I/O interface 1050 may include support for devices attached through various types of peripheral buses, such as a variant of the Peripheral Component Interconnect (PCI) bus standard or the Universal Serial Bus (USB) standard.

[0065] Embodiments of the techniques described herein may be implemented using a single instance of computer system 1000, or multiple computer systems 1000 configured to host different portions or instances of embodiments. Multiple computer systems 1000 may provide for parallel or sequential processing/execution of one or more portions of the techniques described herein.

[0066] Those skilled in the art will appreciate that computer system 1000 is merely illustrative and is not intended to limit the scope of the techniques described herein. Computer system 1000 may include any combination of devices or software that may perform or otherwise provide for the performance of the techniques described herein. For example, computer system 1000 may include or be a combination of a cloud-computing system, a data center, a server rack, a server, a virtual server, a desktop computer, a laptop computer, a tablet computer, a server device, a client device, a mobile telephone, a personal digital assistant (PDA), a mobile audio or video player, a game console, a vehicle-mounted computer, or a Global Positioning System (GPS), or the like. Computer system 1000 may also be connected to other devices that are not illustrated, or may operate as a stand-alone system. In addition, the functionality provided by the illustrated components may in some embodiments be combined in fewer components or distributed in additional components. Similarly, in some embodiments, the functionality of some of the illustrated components may not be provided or other additional functionality may be available.

[0067] Those skilled in the art will also appreciate that, while various items are illustrated as being stored in memory or on storage while being used, these items or portions of them may be transferred between memory and other storage devices for purposes of memory management and data integrity. Alternatively, in other embodiments some or all of the software components may execute in memory on another device and communicate with the illustrated computer system via

inter-computer communication. Some or all of the system components or data structures may also be stored (e.g., as instructions or structured data) on a computer-accessible medium or a portable article to be read by an appropriate drive, various examples of which are described above. In some embodiments, instructions stored on a computer-accessible medium separate from computer system 1000 may be transmitted to computer system 1000 via transmission media or signals such as electrical, electromagnetic, or digital signals, conveyed via a communication medium such as a network or a wireless link. Various embodiments may further include receiving, sending or storing instructions or data implemented in accordance with the foregoing description upon a computer-accessible medium. Accordingly, the present invention may be practiced with other computer system configurations.

[0068] It should be understood that the description and the drawings are not intended to limit the invention to the particular form disclosed, but to the contrary, the intention is to cover all modifications, equivalents, and alternatives falling within the spirit and scope of the present invention as defined by the appended claims. Further modifications and alternative embodiments of various aspects of the invention will be apparent to those skilled in the art in view of this description. Accordingly, this description and the drawings are to be construed as illustrative only and are for the purpose of teaching those skilled in the art the general manner of carrying out the invention. It is to be understood that the forms of the invention shown and described herein are to be taken as examples of embodiments. Elements and materials may be substituted for those illustrated and described herein, parts and processes may be reversed or omitted, and certain features of the invention may be utilized independently, all as would be apparent to one skilled in the art after having the benefit of this description of the invention. Changes may be made in the elements described herein without departing from the spirit and scope of the invention as described in the following claims. Headings used herein are for organizational purposes only and are not meant to be used to limit the scope of the description.

[0069] As used throughout this application, the word “may” is used in a permissive sense (i.e., meaning having the potential to), rather than the mandatory sense (i.e., meaning must). The words “include”, “including”, and “includes” and the like mean including, but not limited to. As used throughout this application, the singular forms “a”, “an” and “the” include plural referents unless the content explicitly indicates otherwise. Thus, for example, reference to “an element” or “a

element" includes a combination of two or more elements, notwithstanding use of other terms and phrases for one or more elements, such as "one or more." The term "or" is, unless indicated otherwise, non-exclusive, i.e., encompassing both "and" and "or." Terms describing conditional relationships, e.g., "in response to X, Y," "upon X, Y," "if X, Y," "when X, Y," and the like, encompass causal relationships in which the antecedent is a necessary causal condition, the antecedent is a sufficient causal condition, or the antecedent is a contributory causal condition of the consequent, e.g., "state X occurs upon condition Y obtaining" is generic to "X occurs solely upon Y" and "X occurs upon Y and Z." Such conditional relationships are not limited to consequences that instantly follow the antecedent obtaining, as some consequences may be delayed, and in conditional statements, antecedents are connected to their consequents, e.g., the antecedent is relevant to the likelihood of the consequent occurring. Further, unless otherwise indicated, statements that one value or action is "based on" another condition or value encompass both instances in which the condition or value is the sole factor and instances in which the condition or value is one factor among a plurality of factors. Unless specifically stated otherwise, as apparent from the discussion, it is appreciated that throughout this specification discussions utilizing terms such as "processing", "computing", "calculating", "determining" or the like refer to actions or processes of a specific apparatus, such as a special purpose computer or a similar special purpose electronic processing/computing device. In the context of this specification, a special purpose computer or a similar special purpose electronic processing or computing device is capable of manipulating or transforming signals, for instance signals represented as physical electronic, optical, or magnetic quantities within memories, registers, or other information storage devices, transmission devices, or display devices of the special purpose computer or similar special purpose processing or computing device.

CLAIMS

What is claimed is:

1. A system, comprising:

a first computer system disposed at a first fluid handling site, the first fluid handling site comprising a first pump, a first valve, and a first tank that handle a first fluid, the first tank having a first fluid-level sensor with which the first computer system is configured to communicate to obtain a level of the first fluid in the first tank, and the first computer system being configured to provide remote control of the first pump or the first valve; and

a server system remote from the fluid handling site, wherein the server system has memory storing instructions that, when executed, effectuate operations comprising:

receiving, with the server system, from the first computer, via a network, a first fluid level sensed by the fluid-level sensor;

obtaining, with the server system, credentials from a first client computing device;

determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid handling site, wherein the server system hosts data about other fluid handling sites the user is not authorized to interact;

after the determination, providing, with the server system, via the network, information by which a first client computing device presents a user interface indicating the first fluid level, the first client computing device being remote from the server system and the first computer system;

receiving, with the server system, from the first client computing device, a first command to change a state of the first pump; and

causing, with the server system, the first computer system disposed at the first fluid handling site to effectuate the command by changing the state of the first pump to a sequence of different target states that change over time.

2. The system of claim 1, wherein:

the first fluid handling site comprises a second pump and a second tank that handle a second fluid, the second tank having a second fluid-level sensor with which the first computer system is configured to communicate to obtain a level of the second fluid in the second tank, and the first computer system being configured to provide remote control of the second pump.

3. The system of claim 2, comprising:

the first tank, the first pump, the first valve, the second tank, and the second pump, wherein the first fluid is water and the second fluid is oil, wherein the first tank or the second tank is an oil/water separation tank.

4. The system of claim 1, wherein:

the sequence of different target states that change over time are configured to ramp up or down a speed of the first pump.

5. The system of claim 1, wherein:

the sequence of different target states that change over time are determined with steps for mitigating shocks to up-stream or down-stream fluid-handling devices relative to the first pump.

6. The system of claim 1, wherein:

at least some of the sequence of different target states that change over time are determined by the first computer system in response to a rate of change in the level of the first fluid in the first tank.

7. The system of claim 1, wherein:

the server system is configured to interface with both a web browser on the client computing device and a special-purpose application executing on the client computing device to present the user interface indicating the first fluid level.

8. The system of claim 1, wherein:

the first computer system is configured to communicate with the server system via a cellular wireless connection.

9. The system of claim 1, wherein the first computer system is configured to translate a plurality of commands from the server system, including the command, from an input format to a plurality of different formats and protocols configured to effectuate changes in states of a plurality of different fluid-handling devices at the first fluid handling site, the different fluid-handling devices including the first pump or the first valve.

10. The system of claim 9, wherein translating the plurality of commands comprises steps for translating commands.

11. The system of claim 9, wherein the plurality of different formats and protocols comprise:

modbus protocol; and

analog electrical signals.

12. The system of claim 9, wherein at least some of the plurality of different fluid-handling devices comprise proportional-integral-derivative controllers configured to drive respective fluid-handling devices to different target setpoints determined by the first computer system responsive to corresponding commands from the server system.

13. The system of claim 9, wherein:

the first computer system is coupled to at least some of the plurality of different fluid handling devices via a bus; and

the first computer system comprises means for controlling which fluid handling devices are permitted to transmit signals on the bus at a given point in time.

14. The system of claim 9, wherein the plurality of different formats and protocols comprise three different protocols communicated over three different types of control busses to corresponding fluid handling devices among the plurality of different fluid handling devices.

15. The system of claim 9, wherein two of the plurality of different formats and protocols comprise binary frames with redundant bits used to detect errors.

16. The system of claim 9, wherein the plurality of different formats and protocols comprise command code format, an on-off signal format, and an application-program interface format.

17. The system of claim 9, wherein the first computer system is configured to operate in an automatic mode, a mixed automatic mode, and a manual mode.

18. The system of claim 17, wherein the automatic mode comprise executing s process recipe in which a collection of set points are targeted.

19. The system of claim 9, wherein translating the plurality of commands comprises steps for identifying protocols and control busses.

20. The system of claim 1, wherein the first computer system comprises a protocol multiplexer.

ABSTRACT

Provided is a process, including: receiving, via the network interface, from a remote user device, a command to change a state of the fluid-handling device to a target state; translating the received command into a translated command operative to cause a local controller of the fluid-handling device to drive the fluid-handling equipment to the target state, the local controller being responsive to the command and feedback from the fluid-handling device indicative of whether the fluid-handling device is in the target state; and sending the translated command to the local controller



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PATENT AND TRADEMARK OFFICE

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REMOTE CONTROL OF FLUID-HANDLING DEVICES

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FIRST NAMED
INVENTOR Aaron Phillips

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AUTHORIZED BY Joshua Tucker

Documents

TOTAL DOCUMENTS: 7

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
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034392-0579591__Continuation_Figures.pdf	4D9F711A585EDEFB93073709896EBAAA472729B9D267F3B965BE72C0510F7AAA3204EFBE7E627FDB670050BD84D8AD1D934DA53C0287C6BC8A54B21DB724B6EA
034392-0579591__POA.pdf	EDFD9CE7A863F9F38DC585E711B7C92F923D5FFE13BC381BFE13B0C9FF66FC051BF1E5FC02D868B5C19204A80D66F607DB96D7BB7F783F94F106F6B17CAA18BF
034392-0579591__Continuation	95160DB051349B78D0C55F211382E93D95E89456A987F100720

Patent Application- APP.TEXT.docx	47D5A4D8234842141B4CCF743C57F3691A4622DB0231C86509 BBE6D2CC9BC90ED676E73D7F3C9
034392- 0579591__Continuation__Specific ation.pdf	F21F122A9E7B868BF02B39BF2B0464EEA2E3066632494F3FA1 E808FEBCB894CEBC905C81E9224FF1830DF7AB707771C3CE 678C277D7DF8836612C535094B82DC

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

STATEMENT REGARDING IDS PRACTICE

Because the present application is a continuation patent application, Applicants are electing to not burden the Office with duplicate information disclosure statements to re-cite references considered with respect to the parent application. Applicants have chosen this course in view of the Manual of Patent Examination and Procedure¹ (MPEP) 609.02, which states as follows:

When filing a continuing application that claims benefit under 35 U.S.C. 120 to a parent application (other than an international application that designated the U.S.), it will not be necessary for the applicant to submit an information disclosure statement in the continuing application that lists the prior art cited by the examiner in the parent application unless the applicant desires the information to be printed on the patent issuing from the continuing application (for continued prosecution applications filed under 37 CFR 1.53(d), see subsection A.1. below). The examiner of the continuing application will consider information which has been considered by the Office in the parent application.

...

The examiner will consider information which has been considered by the Office in a parent application when examining: (A) a continuation application filed under 37 CFR 1.53(b), (B) a divisional application filed under 37 CFR 1.53(b), or (C) a continuation-in-part application filed under 37 CFR 1.53(b). A listing of the information need not be resubmitted in the continuing application unless the applicant desires the information to be printed on the patent.

Applicants understanding is that the Examiner will consider the references listed on the face of (or otherwise indicated as being considered against) parent applications.

Moreover, to avoid later mischaracterizations of the examination process by accused infringers before judges or juries less familiar with the intricacies of the MPEP, Applicants wish to note on the record that, as a result of this practice of the U.S. Patent Office, the face of a patent issuing from the present application will not necessarily contain a full list of references considered.

One must also review the file history of the parent applications to ascertain the full corpus of references considered against the present application.

¹ The forward to the MPEP states as follows: "This Manual is published to provide U.S. Patent and Trademark Office (USPTO) patent examiners, applicants, attorneys, agents, and representatives of applicants with a reference work on the practices and procedures relative to the prosecution of patent applications before the USPTO. It contains instructions to examiners, as well as other material in the nature of information and interpretation, and outlines the current procedures which the examiners are required or authorized to follow in appropriate cases in the normal examination of a patent application."

RESCISSION OF DISCLAIMER AND DISAVOWAL

Applicant does not believe that any disclaimer or disavowal arises from any arguments or amendments made in any of the parent patent applications to which this application claims priority, but to the extent any disclaimer or disavowal is believed by the Examiner to exist, Applicant hereby rescinds that disclaimer or disavowal. The Examiner should revisit the prior art cited in the parent cases in view of this statement. Applicant intends to present claims of different scope that are believed to be allowable for different reasons.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	New
Filing Date	08 May 2024
First Named Inventor	Aaron Phillips
Title	REMOTE CONTROL OF FLUID-HANDLING DEVICES
Art Unit	
Examiner Name	
Attorney Docket Number	034392-0579591

SIGNATURE of Applicant or Patent Practitioner

Signature	/Joshua Tucker/	Date (Optional)	08 May 2024
Name	Joshua Tucker	Registration Number	63809
Title (if Applicant is a juristic entity)	Appointed Practitioner		
Applicant Name (if Applicant is a juristic entity)	SitePro, Inc.		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐

*Total of _____ forms are submitted.

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0035. Public burden for this form is estimated to average 3 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** If filing this completed form by mail, send to: **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☒ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

00909

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

SitePro, Inc.

- ☐ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature

David Bateman

Date (Optional)

9/21/2020

Name

David Bateman

Title

Chairman and Co-Chief Executive Officer

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	034392-0579591
		Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES		
<p>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.</p> <p>This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</p>			

Secrecy Order 37 CFR 5.2:

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

Inventor Information:

Inventor 1 Remove				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Aaron		Phillips	
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service				
City	Lubbock	State/Province	TX	Country of Residence US
Mailing Address of Inventor:				
Address 1	c/o 9502 Highway 87			
Address 2				
City	Lubbock	State/Province	TX	
Postal Code	79423	Country	US	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
☐ An Address is being provided for the correspondence Information of this application.	
Customer Number	00909
Email Address	docket_ip@pillsburylaw.com Add Email Remove Email

Application Information:

Title of the Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES		
Attorney Docket Number	034392-0579591	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	3	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	034392-0579591
		Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	00909		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	18212131	2023-06-20

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	034392-0579591
		Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES		

Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
18212131	Continuation of	17681373	2022-02-25	11726504	2023-08-15
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17681373	Continuation of	17513539	2021-10-28	11294403	2022-04-05
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17513539	Continuation of	16656319	2019-10-17	11175680	2021-11-16
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16656319	Continuation of	15867077	2018-01-10	10488871	2019-11-26
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15867077	Continuation of	14984422	2015-12-30	9898014	2018-02-20
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14984422	Continuation of	14147190	2014-01-03	9342078	2016-05-17
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14147190	Continuation of	13708557	2012-12-07	8649909	2014-02-11
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button. Add					

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	034392-0579591
		Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES		

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	<div>Remove</div> Access Code ⁱ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			<div>Add</div>

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	034392-0579591
	Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	034392-0579591
		Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
Applicant 1			Remove
<p>If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.</p>			
Clear			
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor	
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor: <input type="text"/>			
If the Applicant is an Organization check here. ☒			
Organization Name	SitePro, Inc.		
Mailing Address Information For Applicant:			
Address 1	9502 Highway 87		
Address 2			
City	Lubbock	State/Province	TX
Country	US	Postal Code	79423
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button. Add			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	034392-0579591
		Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES		

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

[Remove](#)

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1				
Address 2				
City			State/Province	
Country ⁱ			Postal Code	
Phone Number			Fax Number	
Email Address				

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

[Add](#)**Signature:**[Remove](#)

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the **INITIAL** filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Joshua Tucker/			Date (YYYY-MM-DD)	2024-05-08
First Name	Joshua	Last Name	Tucker	Registration Number	63809

Additional Signature may be generated within this form by selecting the Add button.

[Add](#)

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	034392-0579591
		Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
- 2 A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4 A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5 A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6 A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7 A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8 A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- 9 A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
18/658,724	05/08/2024		0	034392-0579591	20	1

CONFIRMATION NO. 6780

909

Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

FILING RECEIPT



0000000073135401

Date Mailed: 05/29/2024

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Aaron Phillips, Lubbock, TX;

Applicant(s)

SitePro, Inc., Lubbock, TX;

Power of Attorney: The patent practitioners associated with Customer Number 00909

Domestic Priority data as claimed by applicant

This application is a CON of 18/212,131 06/20/2023
which is a CON of 17/681,373 02/25/2022 PAT 11,726,504
which is a CON of 17/513,539 10/28/2021 PAT 11,294,403
which is a CON of 16/656,319 10/17/2019 PAT 11,175,680
which is a CON of 15/867,077 01/10/2018 PAT 10,488,871
which is a CON of 14/984,422 12/30/2015 PAT 9,898,014
which is a CON of 14/147,190 01/03/2014 PAT 9,342,078
which is a CON of 13/708,557 12/07/2012 PAT 8,649,909

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 05/28/2024

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/658,724**

Projected Publication Date: To Be Determined - pending completion of Missing Parts.

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

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The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
18/658,724

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	64		N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	280		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	320		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x	= 0	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x	= 0			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	664		TOTAL	

APPLICATION AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))						OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))						OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/658,724	05/08/2024	Aaron Phillips	034392-0579591

CONFIRMATION NO. 6780

909

Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

FORMALITIES LETTER



OC000000073135403

Date Mailed: 05/29/2024

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to the above-identified nonprovisional application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee has not been received.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Surcharge as set forth in 37 CFR 1.16(f) has not been received.

The surcharge is due for any one of:

- late submission of the basic filing fee, search fee, or examination fee,
- late submission of inventor's oath or declaration,
- filing an application that does not contain at least one claim on filing, or
- submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required (including the fees noted above) are as follows. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- **\$64** basic filing fee.
- **\$64** surcharge.
- **\$280** search fee.
- **\$320** examination fee.
- **\$(0)** previous unapplied payment amount.
- **\$728** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be addressed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

REPLY VIA ELECTRONIC FILING

A reply may be submitted via electronic filing only by registered users of the appropriate USPTO patent electronic filing system and must include:

- A separate document having the document description, "**Applicant response to Pre-Exam Formalities Notice**"; and
- the item(s) for which a reply period is set forth above.

For more information about electronic filing, contact the Patent Electronic Business Center (EBC) 1-866-217-9197 or visit <https://www.uspto.gov/ebo>

NOTE: If the reply is not being submitted electronically, a copy of this notice must be included.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/saabdurahman/



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Kathi Vidal

Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office

Derrick Brent

Deputy Under Secretary of Commerce for Intellectual Property and
Deputy Director of the United States Patent and Trademark Office

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)		Docket Number (Optional) 034392-0579591																																		
Application Number 18/658,724	Filed 08 May 2024																																			
For REMOTE CONTROL OF FLUID-HANDLING DEVICES																																				
Art Unit Unassigned	Examiner Unassigned																																			
<p>This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.</p> <p>The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):</p> <table style="width: 100%; border-collapse: collapse;"><thead><tr><th></th><th style="text-align: center;"><u>Fee</u></th><th style="text-align: center;"><u>Small Entity Fee</u></th><th style="text-align: center;"><u>Micro Entity Fee</u></th><th></th></tr></thead><tbody><tr><td>☒ One month (37 CFR 1.17(a)(1))</td><td style="text-align: right;">\$220</td><td style="text-align: right;">\$88</td><td style="text-align: right;">\$44</td><td style="text-align: right;">\$ <u>88.00</u></td></tr><tr><td>☐ Two months (37 CFR 1.17(a)(2))</td><td style="text-align: right;">\$640</td><td style="text-align: right;">\$256</td><td style="text-align: right;">\$128</td><td style="text-align: right;">\$ _____</td></tr><tr><td>☐ Three months (37 CFR 1.17(a)(3))</td><td style="text-align: right;">\$1,480</td><td style="text-align: right;">\$592</td><td style="text-align: right;">\$296</td><td style="text-align: right;">\$ _____</td></tr><tr><td>☐ Four months (37 CFR 1.17(a)(4))</td><td style="text-align: right;">\$2,320</td><td style="text-align: right;">\$928</td><td style="text-align: right;">\$464</td><td style="text-align: right;">\$ _____</td></tr><tr><td>☐ Five months (37 CFR 1.17(a)(5))</td><td style="text-align: right;">\$3,160</td><td style="text-align: right;">\$1,264</td><td style="text-align: right;">\$632</td><td style="text-align: right;">\$ _____</td></tr></tbody></table> <p>☒ Applicant asserts small entity status. See 37 CFR 1.27.</p> <p>☐ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.</p> <p>☐ A check in the amount of the fee is enclosed.</p> <p>☐ Payment by credit card. Form PTO-2038 is attached.</p> <p>☐ The Director has already been authorized to charge fees in this application to a Deposit Account.</p> <p>☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>033975</u>.</p> <p>☒ Payment made via USPTO patent electronic filing system.</p> <p>WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> <p>I am the</p> <p>☐ applicant.</p> <p>☒ attorney or agent of record. Registration number <u>80454</u>.</p> <p>☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.</p> <table style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%; text-align: center; padding: 5px;"><u>/Luke Hartman/</u> Signature</td><td style="width: 50%; text-align: center; padding: 5px;"><u>29 August 2024</u> Date</td></tr><tr><td style="width: 50%; text-align: center; padding: 5px;"><u>Luke Hartman</u> Typed or printed name</td><td style="width: 50%; text-align: center; padding: 5px;"><u>(512) 580-9684</u> Telephone Number</td></tr></table> <p>NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.</p>				<u>Fee</u>	<u>Small Entity Fee</u>	<u>Micro Entity Fee</u>		☒ One month (37 CFR 1.17(a)(1))	\$220	\$88	\$44	\$ <u>88.00</u>	☐ Two months (37 CFR 1.17(a)(2))	\$640	\$256	\$128	\$ _____	☐ Three months (37 CFR 1.17(a)(3))	\$1,480	\$592	\$296	\$ _____	☐ Four months (37 CFR 1.17(a)(4))	\$2,320	\$928	\$464	\$ _____	☐ Five months (37 CFR 1.17(a)(5))	\$3,160	\$1,264	\$632	\$ _____	<u>/Luke Hartman/</u> Signature	<u>29 August 2024</u> Date	<u>Luke Hartman</u> Typed or printed name	<u>(512) 580-9684</u> Telephone Number
	<u>Fee</u>	<u>Small Entity Fee</u>	<u>Micro Entity Fee</u>																																	
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<u>/Luke Hartman/</u> Signature	<u>29 August 2024</u> Date																																			
<u>Luke Hartman</u> Typed or printed name	<u>(512) 580-9684</u> Telephone Number																																			
☒ * Total of <u>1</u> forms are submitted.																																				

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0031. Public burden for this form is estimated to average 6 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** If filing this completed form by mail, send to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013). <https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013). <https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to:

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- 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
- 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
- 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
- 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
- 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
- 9) the Office of Personnel Management (OPM) for personnel research purposes; and
- 10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.



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ELECTRONIC PAYMENT RECEIPT

APPLICATION #
18/658,724

RECEIPT DATE / TIME
08/29/2024 06:41:47 PM Z ET

ATTORNEY DOCKET #
034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 6780

FILED BY Nicole Banks

PATENT CENTER # 66973370

AUTHORIZED BY Luke Hartman

CUSTOMER # 909

FILING DATE 05/08/2024

CORRESPONDENCE ADDRESS -

FIRST NAMED INVENTOR Aaron Phillips

Payment Information

PAYMENT METHOD
DA / 033975

PAYMENT TRANSACTION ID
E20248SI42306310

PAYMENT AUTHORIZED BY
Nicole Banks

PRE-AUTHORIZED ACCOUNT
033975

PRE-AUTHORIZED CATEGORY
37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
2051	SURCHARGE- LATE FILING FEE, SEARCH FEE, EXAMINATION FEE, INVENTOR'S OATH OR DECLARATION, OR APPLICATION FILED WITHOUT AT LEAST ONE CLAIM OR BY REFERENCE	64.00	1	64.00
2111	UTILITY PATENT APPL. SEARCH FEE	280.00	1	280.00
4011	BASIC FILING FEE- UTILITY	64.00	1	64.00
2311	EXAMINATION OF ORIGINAL	320.00	1	320.00

PATENT APPLICATION

2251	EXTENSION FOR RESPONSE WITHIN FIRST MONTH	88.00	1	88.00
TOTAL AMOUNT:				\$816.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Aaron Phillips

Serial No.: 18/658,724
Filed: 08 May 2024

For: REMOTE CONTROL OF FLUID-
HANDLING DEVICES

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Group Art Unit: Unassigned
Confirmation No.: 6780
Examiner: Unassigned

Atty. Docket: 034392-0579591

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF TRANSMISSION OR MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. § 1.6(d), or is being transmitted via the Office electronic filing system in accordance with 37 C.F.R. § 1.6(a)(4), or is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

29 August 2024

/Luke Hartman/

Date

Luke Hartman, Reg. No. 80454

Commissioner:

RESPONSE TO NOTICE TO FILE MISSING PARTS
OF NON-PROVISIONAL APPLICATION MAILED 29 MAY 2024

In response to the Notice to File Missing Parts of Non-Provisional Application,
Applicant herewith submits the following:

- ☒ \$64 basic filing fee
- ☒ \$64 surcharge
- ☒ \$280 search fee
- ☒ \$320 examination fee
- ☒ Petition for 1-Month Extension of Time

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

Date: 29 August 2024

/Luke Hartman/

Luke Hartman
Registration No. 80454
Pillsbury Winthrop Shaw Pittman LLP
P.O. Box 10500
McLean, VA 22102
Phone 512-580-9684

UNITED STATES
PATENT AND TRADEMARK OFFICEP.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/658,724RECEIPT DATE / TIME
08/29/2024 06:41:47 PM Z ETATTORNEY DOCKET #
034392-0579591

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CONFIRMATION # 6780

FILED BY Nicole Banks

PATENT CENTER # 66973370

FILING DATE 05/08/2024

CUSTOMER # 909

FIRST NAMED
INVENTOR Aaron PhillipsCORRESPONDENCE
ADDRESS -

AUTHORIZED BY Luke Hartman

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
034392-0579591 Response to Notice to File Missing Parts filed 29AUG2024.pdf	2	Applicant Response to Pre-Exam Formalities Notice	74 KB
034392-0579591 1-Month Extension of Time filed 29AUG2024.pdf	2	Extension of Time	453 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
034392-0579591 Response to Notice to File Missing Parts filed 29AUG2024.pdf	D91967F5092037116A1EAFB583BC3A036C675132146A7C2F60 B8F578551AC7029DC509FE8163E8AC76744F26242E8E435D7 FFEF9CCB9FF1A54354A9D47201F9A

034392-0579591 1-Month
Extension of Time filed
29AUG2024.pdf

7A5C158067E2E4B188BED917B73D9B203968D0CEAA6DACA4
ECCA2BE967BC5A2463DA740F9AE8C0C6135B82AA8F5E3B9
CA7F7770CDD7DF27A958767C6FA57229A

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
18/658,724	05/08/2024		728	034392-0579591	20	1

CONFIRMATION NO. 6780

UPDATED FILING RECEIPT



0000000077333218

909

Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

Date Mailed: 09/05/2024

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Aaron Phillips, Lubbock, TX;

Applicant(s)

SitePro, Inc., Lubbock, TX;

Power of Attorney: The patent practitioners associated with Customer Number 00909

Domestic Priority data as claimed by applicant

This application is a CON of 18/212,131 06/20/2023 PAT 12,019,461
which is a CON of 17/681,373 02/25/2022 PAT 11,726,504
which is a CON of 17/513,539 10/28/2021 PAT 11,294,403
which is a CON of 16/656,319 10/17/2019 PAT 11,175,680
which is a CON of 15/867,077 01/10/2018 PAT 10,488,871
which is a CON of 14/984,422 12/30/2015 PAT 9,898,014
which is a CON of 14/147,190 01/03/2014 PAT 9,342,078
which is a CON of 13/708,557 12/07/2012 PAT 8,649,909

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 05/28/2024

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/658,724**

Projected Publication Date: 12/12/2024

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
18/658,724

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	64		N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	280		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	320		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x	= 0	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x	= 0			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	664		TOTAL	

APPLICATION AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY		
		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)	
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))						OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))						OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR		
				TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE		

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/658,724	05/08/2024	Aaron Phillips	034392-0579591	6780

909 7590 11/21/2024
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

EXAMINER

EVERETT, CHRISTOPHER E

ART UNIT	PAPER NUMBER
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2116

NOTIFICATION DATE	DELIVERY MODE
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11/21/2024

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket_ip@pillsburylaw.com

DETAILED ACTION

Claims 1-20 are pending.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis (i.e., changing from AIA to pre-AIA) for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claim Objections

Claim 18 is objected to because of the following informalities: “executing s process recipe” is recited and should be “executing [[s]] a process recipe”. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*,

140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The filing of a terminal disclaimer by itself is not a complete reply to a nonstatutory double patenting (NSDP) rejection. A complete reply requires that the terminal disclaimer be accompanied by a reply requesting reconsideration of the prior Office action. Even where the NSDP rejection is provisional the reply must be complete. See MPEP § 804, subsection I.B.1. For a reply to a non-final Office action, see 37 CFR 1.111(a). For a reply to final Office action, see 37 CFR 1.113(c). A request for reconsideration while not provided for in 37 CFR 1.113(c) may be filed after final for consideration. See MPEP §§ 706.07(e) and 714.13.

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The actual filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely

online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/apply/applying-online/eterminal-disclaimer.

Claims 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 12,019,461, claims 1-15 and 17 of U.S. Patent No. 11,726,504, and claims 1-20 of U.S. Patent No. 11,294,403. Although the claims at issue are not identical, they are not patentably distinct from each other as outlined below.

App. No. 18/658721	U.S. Patent No. 12,019,461	U.S. Patent No. 11,726,504	U.S. Patent No. 11,294,403
Claim 1	Claim 1	Claim 1	Claim 1
Claim 2		Claim 17	Claim 2
Claim 3			Claim 3
Claim 4	Claim 2	Claim 2	Claim 4
Claim 5	Claim 3	Claim 3	Claim 5
Claim 6	Claim 4	Claim 4	Claim 6
Claim 7	Claim 5	Claim 5	Claim 7
Claim 8	Claim 6	Claim 6	Claim 8
Claim 9	Claim 7	Claim 7	Claim 9
Claim 10	Claim 8	Claim 8	Claim 10
Claim 11	Claim 9	Claim 9	Claim 11
Claim 12	Claim 10	Claim 10	Claim 12

Claim 13	Claim 11	Claim 11	Claim 13
Claim 14	Claim 12	Claim 12	Claim 14
Claim 15	Claim 16		Claim 15
Claim 16	Claim 13	Claim 13	Claim 16
Claim 17	Claim 14	Claim 14	Claim 17
Claim 18			Claim 18
Claim 19	Claim 15	Claim 15	Claim 19
Claim 20			Claim 20

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER E EVERETT whose telephone number is (571)272-2851. The examiner can normally be reached Monday-Friday 8:00 am to 5:00 pm (Eastern).

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher E. Everett/
Primary Examiner, Art Unit 2116

Notice of References Cited	Application/Control No. 18/658,724		Applicant(s)/Patent Under Reexamination Phillips, Aaron	
	Examiner CHRISTOPHER E EVERETT		Art Unit 2116	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Name	CPC Classification	US Classification
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	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

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Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 18/658,724		Applicant(s)/Patent Under Reexamination Phillips, Aaron	
	Examiner CHRISTOPHER E EVERETT		Art Unit 2116	Page 2 of 2

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*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Country	Name	CPC Classification
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	T					

NON-PATENT DOCUMENTS

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	X	

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Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

<i>Search Notes</i> 	Application/Control No. 18/658,724	Applicant(s)/Patent Under Reexamination Phillips, Aaron
	Examiner CHRISTOPHER E EVERETT	Art Unit 2116

CPC - Searched*		
Symbol	Date	Examiner
(G05D7/0676 or H04L67/02 or G05B19/0428 or G06F3/0484 or E21B47/00 or G05B9/02 or G05B2219/24015 or G05B2219/25204 or G05B2219/31369 or G05B2219/23472)	11/12/2024	CEE

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Search of (G05D7/0676 or H04L67/02 or G05B19/0428 or G06F3/0484 or E21B47/00 or G05B9/02 or G05B2219/24015 or G05B2219/25204 or G05B2219/31369 or G05B2219/23472) using text searches	11/12/2024	CEE
Search of 700/1,282,275,281,42 using text searches	11/12/2024	CEE
Search of DAV using inventor search	11/12/2024	CEE
Search of PE2E using applicant, inventor, and text searches	11/12/2024	CEE
Review of file histories and search histories for parent patent application numbers 18/212131; 17/681373; 17/513539 16/656319; 15/867077; 14/984422; 14/147190; 13/708557	11/12/2024	CEE

/Christopher E. Everett/ Primary Examiner, Art Unit 2116	
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<i>Search Notes</i> 	Application/Control No. 18/658,724	Applicant(s)/Patent Under Reexamination Phillips, Aaron
	Examiner CHRISTOPHER E EVERETT	Art Unit 2116

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/Christopher E. Everett/ Primary Examiner, Art Unit 2116	
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STATEMENT REGARDING IDS PRACTICE

Because the present application is a continuation patent application, Applicants are electing to not burden the Office with duplicate information disclosure statements to re-cite references considered with respect to the parent application. Applicants have chosen this course in view of the Manual of Patent Examination and Procedure¹ (MPEP) 609.02, which states as follows:

When filing a continuing application that claims benefit under 35 U.S.C. 120 to a parent application (other than an international application that designated the U.S.), it will not be necessary for the applicant to submit an information disclosure statement in the continuing application that lists the prior art cited by the examiner in the parent application unless the applicant desires the information to be printed on the patent issuing from the continuing application (for continued prosecution applications filed under 37 CFR 1.53(d), see subsection A.1. below). The examiner of the continuing application will consider information which has been considered by the Office in the parent application.

...

The examiner will consider information which has been considered by the Office in a parent application when examining: (A) a continuation application filed under 37 CFR 1.53(b), (B) a divisional application filed under 37 CFR 1.53(b), or (C) a continuation-in-part application filed under 37 CFR 1.53(b). A listing of the information need not be resubmitted in the continuing application unless the applicant desires the information to be printed on the patent.

Applicants understanding is that the Examiner will consider the references listed on the face of (or otherwise indicated as being considered against) parent applications.

Moreover, to avoid later mischaracterizations of the examination process by accused infringers before judges or juries less familiar with the intricacies of the MPEP, Applicants wish to note on the record that, as a result of this practice of the U.S. Patent Office, the face of a patent issuing from the present application will not necessarily contain a full list of references considered.

One must also review the file history of the parent applications to ascertain the full corpus of references considered against the present application.

¹ The forward to the MPEP states as follows: "This Manual is published to provide U.S. Patent and Trademark Office (USPTO) patent examiners, applicants, attorneys, agents, and representatives of applicants with a reference work on the practices and procedures relative to the prosecution of patent applications before the USPTO. It contains instructions to examiners, as well as other material in the nature of information and interpretation, and outlines the current procedures which the examiners are required or authorized to follow in appropriate cases in the normal examination of a patent application."

RESCISSION OF DISCLAIMER AND DISAVOWAL

Applicant does not believe that any disclaimer or disavowal arises from any arguments or amendments made in any of the parent patent applications to which this application claims priority, but to the extent any disclaimer or disavowal is believed by the Examiner to exist, Applicant hereby rescinds that disclaimer or disavowal. The Examiner should revisit the prior art cited in the parent cases in view of this statement. Applicant intends to present claims of different scope that are believed to be allowable for different reasons.

/Christopher E. Everett/ (11/12/2024)



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/658,724	05/08/2024	Aaron Phillips	034392-0579591

CONFIRMATION NO. 6780

909
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

PUBLICATION NOTICE



OC000000081852360

Date Mailed: 12/12/2024

Title:REMOTE CONTROL OF FLUID-HANDLING DEVICES

Publication No.US-2024-0411329-A1

Publication Date:12/12/2024

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be viewed using the USPTO's publicly available Searchable Databases via the Patent Public Search tool at www.uspto.gov. The direct link to access the Patent Public Search tool is currently <https://ppubs.uspto.gov/pubwebapp/static/pages/ppubsbasic.html>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through Patent Center, the USPTO's electronic patent application filing and management system. The direct link to access this status information is currently <https://patentcenter.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of Patent Center.

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PATENT APPLICATION FEE DETERMINATION RECORD				Application or Docket Number 18/658,724		Filing Date 05/08/2024		☐ To be Mailed	
Substitute for Form PTO-875									
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED - PART I									
FOR		(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE (\$)		FEE (\$)			
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A	N/A					
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A	N/A					
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A	N/A					
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =	*	x \$40 =					
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*	x \$ 192 =					
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL					
APPLICATION AS AMENDED - PART II									
AMENDMENT	12/13/2024	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 31	Minus	** 20	= 11	x \$40 =		440	
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0	x \$ 192 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		440	
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$ 0 =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$ 0 =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/PAULA D MCCRAY STANLEY/			
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".									
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

First-named inventor:	§	
Aaron Phillips	§	Group Art Unit: 2116
	§	Confirmation No.: 6780
Serial No.: 18/658,724	§	Examiner: CHRISTOPHER E EVERETT
Filed: 05/08/2024	§	
	§	
For: REMOTE CONTROL OF FLUID- HANDLING DEVICES	§	Atty. Docket: 034392-0579591
	§	

CERTIFICATE OF TRANSMISSION OR MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. § 1.6(d), or is being transmitted via the Office electronic filing system in accordance with 37 C.F.R. § 1.6(a)(4), or is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

13 December 2024

/Josh Tucker/

Date _____

Josh Tucker, reg. 63809

**AMENDMENT AND RESPONSE
TO OFFICE ACTION ISSUED ON 21 NOVEMBER 2024**

Authorization for Extensions of Time and Payment of Fees

In accordance with 37 C.F.R. § 1.136, Applicant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request thereof. The Commissioner is authorized to charge any additional fees that may be required to deposit account no. 033975, referencing the above attorney docket number.

AMENDMENTS TO THE CLAIMS

The following is a complete listing of the claims, which replaces all previous versions and listings of the claims.

1-20. (Canceled)

21. (new) A tangible, non-transitory, machine-readable medium storing instructions that, when executed by one or more processors, effectuate operations comprising:

receiving, with a first computing system, via a network interface, a plurality of commands encoded in a first protocol to control a plurality of different fluid-handling devices at a fluid-handling site, different commands among the plurality of commands being directed to different fluid handling devices among the plurality of fluid-handling devices, wherein:

the plurality of commands are responsive to inputs to a command interface presented on a remote user computing device, and

the plurality of commands are received after determining that a user of the remote user computing device is authorized to issue commands to the first computing system based on a user account that indicates the user is authorized to issue commands to the first computing system, the user account being accessed from a data store;

for at least some of the plurality of commands, determining, with the first computing system, a plurality of different target states of a given one of the fluid-handling devices over time, wherein the first computing system is operative to maintain control of the fluid handling devices in an absence of an external network connection;

translating, with the first computing system, the plurality of commands into translated commands encoded in a plurality of protocols different from the first protocol, at least some of the translated commands being operative to cause a local controller of the given fluid-handling device to the plurality of different target states, and the local controller being responsive to the at least some of the translated commands and feedback

from the given fluid-handling device, the feedback being indicative of whether the given fluid-handling device is in targeted states among the plurality of different target states;

sending, with the first computing system, the translated commands to the local controllers;

obtaining, with the first computing system, site data and storing the site data in a report buffer of the first computing system such that the site data in the report buffer is not lost in the absence of the network connection, the site data including alarms, measurements from sensors, or other data associated with the fluid-handling site or associated with at least some of the plurality of fluid-handling devices;

sending, with the first computing system, the site data stored in the report buffer to a remote second computing system.

22. (new) The medium of claim 21, wherein:

other user accounts in the data store indicate other users are not authorized to issue commands to the first computing system; and

the other user accounts indicate the other users are authorized to view reports from the first computing system.

23. (new) The medium of claim 21, wherein sending is in response to a pull command from the second computing system.

24. (new) The medium of claim 21, wherein sending comprises determining, with the first computing system, to push the site data in the report buffer and, in response, pushing the site data in the report buffer to the second computing system.

25. (new) The medium of claim 21, wherein obtaining the site data comprises:
polling, with the first computing system, sensors of the fluid handling site.

26. (new) The medium of claim 21, wherein obtaining the site data comprises:
accessing, with the first computing system, an alarm log from one of the plurality
of fluid handling devices via a control bus.
27. (new) The medium of claim 21, the operations comprising:
after a predetermined period of time has elapsed after sending the site data,
sending newer site data stored in the report buffer to the remote second computing
system.
28. (new) The medium of claim 21, wherein data stored in the report buffer is
periodically sent to the remote second computing system.
29. (new) The medium of claim 21, wherein the site data is obtained while network
access to the remote second computing system is intermittently ceased, and wherein
sending the site data occurs after network access to the remote second computing system
has been restored.
30. (new) The medium of claim 21, wherein the fluid-handling site comprises an oil
well, a petro water disposal or re-injection facility, or a petroleum pumping station.
31. (new) The medium of claim 21, wherein the fluid-handling site is a water
handling facility.
32. (new) The medium of claim 21, the operations further comprising:
detecting a leak from a signal based on a fluid-level sensor of a tank at the fluid
handling site.

33. (new) The medium of claim 21, wherein one of the plurality of fluid handling devices comprises an oil/water separation tank configured to separate oil from water, and wherein the plurality of commands comprises a command operative to change a level of the oil/water separation tank at which oil meets water.

34. (new) The medium of claim 21, wherein:
one of the plurality of different target states that change over time is determined by the first computing system in response to a rate of change in a level of a fluid in a tank.

35. (new) The medium of claim 21, wherein:
some of the plurality of different target states that change over time are operative to ramp up or down speed of a motor to mitigate shocks to up-stream or down-stream fluid-handling devices.

36. (new) The medium of claim 21, wherein the first computing system has an automatic mode.

37. (new) The medium of claim 21, wherein the first computing system has a mixed automatic mode.

38. (new) The medium of claim 21, comprising:
prior to sending at least some of the translated commands, checking the at least some of the translated commands or their corresponding received commands for validity based on a current condition of the fluid-handling site to prevent a commanded action from harming the plurality of fluid-handling devices.

39. (new) The medium of claim 38, wherein checking for validity comprises checking against a maximum or minimum liquid level for a tank.

40. (new) The medium of claim 21, wherein translating abstracts details of site-specific implementation of the first computing system.

41. (new) The medium of claim 21, wherein:

the first computing system comprises a site master controller located at the fluid-handling site; and

the second computing system comprises a command center server in communication with a plurality of other site master controllers at a plurality of other fluid-handling sites.

42. (new) The medium of claim 21, wherein the command interface is presented on in a web browser executing on the remote user computing device.

43. (new) The medium of claim 21, wherein:

after pushing, receiving another command configured to instruct a feed-forward-controlled fluid-handling device among the plurality of fluid-handling devices to adjust to attain a target state, the feedforward control being based on a table or formula applied by a local controller of the feed-forward-controlled fluid-handling device; and

the operations comprise:

translating the other command to produce a translated command and sending the translated command to the feed-forward-controlled fluid-handling device;

obtaining sensor data characterizing a response of the feed-forward-controlled fluid-handling device to the translated command; and

determining, by the first computing system, to send another command to the feed-forward-controlled fluid-handling device to make a further adjustment based on the sensor data characterizing the response.

44. (new) The medium of claim 21, wherein:

a given command among the plurality of commands is configured to instruct one

of the fluid-handling devices among the plurality of fluid-handling devices to adjust to attain another target state; and

the operations comprise:

translating the given command to produce a translated command and sending the translated command to the one of the fluid-handling devices;

obtaining sensor data characterizing a response of the one of the fluid-handling devices to the translated command; and

determining, by the first computing system, to send another command to the one of the fluid-handling devices to make a further adjustment based on the sensor data characterizing the response.

45. (new) The medium of claim 21, the operations further comprising:

exercising feedback control, by the first computing system, of one of the fluid-handling devices among the plurality of fluid-handling devices based on first sensor data by adjusting a target sent to a local controller of the one of the fluid-handling devices.

46. (new) The medium of claim 45, wherein the local controller also exercises feedback control of a state of the one of the fluid-handling devices using proportional-integral-derivative control.

47. (new) The medium of claim 21, the operations further comprising:

exercising feedback control, by the first computing system, of a first fluid-handling device among the plurality of fluid handling devices based on first sensor data by adjusting a first target state sent to a first local controller of the first fluid-handling device, the first local controller also exercising feedback control of the first fluid-handling device; and

exercising feedback control, by the first computing system, of a second fluid-handling device based on second sensor data by adjusting a second target state sent to a

second local controller of the second fluid-handing device, the second local controller exercising feedforward control of second the fluid-handling device.

48. (new) The medium of claim 21, the operations further comprising:
after sending the translated commands, obtaining, with the first computing system, sensor data from the given fluid-handling device among the plurality of fluid-handling devices and confirming, with the first computing system, that at least some of the translated commands were executed based on the received sensor data.

49. (new) The medium of claim 21, the operations comprising:
steps for exercising remote control of the fluid-handling devices.

50. (new) A system, comprising:
a plurality of fluid handling devices; and
a first computing system communicatively coupled to the plurality of fluid handling devices, the first computing system storing instructions that, when executed by the first computing system, effectuate operations comprising:
receiving, with a first computing system, via a network interface, a plurality of commands encoded in a first protocol to control a plurality of different fluid-handling devices at a fluid-handling site, different commands among the plurality of commands being directed to different fluid handling devices among the plurality of fluid-handling devices, wherein:

the plurality of commands are responsive to inputs to a command interface presented on a remote user computing device, and

the plurality of commands are received after determining that a user of the remote user computing device is authorized to issue commands to the first computing system based on a user account that indicates the user is authorized to issue commands to the first computing system, the user account being accessed from a data store;

for at least some of the plurality of commands, determining, with the first computing system, a plurality of different target states of a given one of the fluid-handling devices over time, wherein the first computing system is operative to maintain control of the fluid handling devices in an absence of an external network connection;

translating, with the first computing system, the plurality of commands into translated commands encoded in a plurality of protocols different from the first protocol, at least some of the translated commands being operative to cause a local controller of the given fluid-handling device to the plurality of different target states, and the local controller being responsive to the at least some of the translated commands and feedback from the given fluid-handling device, the feedback being indicative of whether the given fluid-handling device is in targeted states among the plurality of different target states;

sending, with the first computing system, the translated commands to the local controllers;

obtaining, with the first computing system, site data and storing the site data in a report buffer of the first computing system such that the site data in the report buffer is not lost in the absence of the network connection, the site data including alarms, measurements from sensors, or other data associated with the fluid-handling site or associated with at least some of the plurality of fluid-handling devices;

sending, with the first computing system, the site data stored in the report buffer to a remote second computing system.

51. (new) A system, comprising:

- a fluid-handling site;
- a plurality of fluid handling devices at the fluid-handling site; and
- a first computing system communicatively coupled to the plurality of fluid handling devices, the first computing system storing instructions that, when executed by the first computing system, effectuate operations comprising:

- receiving, with a first computing system, via a network interface, a

plurality of commands encoded in a first protocol to control a plurality of different fluid-handling devices at a fluid-handling site, different commands among the plurality of commands being directed to different fluid handling devices among the plurality of fluid-handling devices, wherein:

the plurality of commands are responsive to inputs to a command interface presented on a remote user computing device, and

the plurality of commands are received after determining that a user of the remote user computing device is authorized to issue commands to the first computing system based on a user account that indicates the user is authorized to issue commands to the first computing system, the user account being accessed from a data store;

for at least some of the plurality of commands, determining, with the first computing system, a plurality of different target states of a given one of the fluid-handling devices over time, wherein the first computing system is operative to maintain control of the fluid handling devices in an absence of an external network connection;

translating, with the first computing system, the plurality of commands into translated commands encoded in a plurality of protocols different from the first protocol, at least some of the translated commands being operative to cause a local controller of the given fluid-handling device to the plurality of different target states, and the local controller being responsive to the at least some of the translated commands and feedback from the given fluid-handling device, the feedback being indicative of whether the given fluid-handling device is in targeted states among the plurality of different target states;

sending, with the first computing system, the translated commands to the local controllers;

obtaining, with the first computing system, site data and storing the site data in a report buffer of the first computing system such that the site data in the report buffer is not lost in the absence of the network connection, the site data including alarms, measurements from sensors, or other data associated with the fluid-handling site or associated with at least some of the plurality of fluid-handling devices;

sending, with the first computing system, the site data stored in the report buffer to a remote command center server, wherein:

other user accounts in the data store indicate other users are not authorized to issue commands to the first computing system;

the other user accounts indicate the other users are authorized to view reports from the first computing system;

the site data stored in the report buffer comprises a sensor measurement of the fluid handling site and an alarm;

the site data is obtained while network access to the remote command center server is intermittently ceased, and wherein sending the site data occurs after network access to the remote command center server is intermittently ceased;

translating abstracts details of site-specific implementation of the first computing system;

a given command among the plurality of commands is configured to instruct the given fluid-handling device to adjust to attain another target state; and

the operations further comprise:

translating the given command to produce another translated command and sending the other translated command to the given fluid-handling device;

obtaining sensor data characterizing a response of the given fluid-handling device to the other translated command; and

determining, by the first computing system, to send a further command to the given fluid-handling device to make a further adjustment based on the sensor data characterizing the response.

REMARKS

In the office action, the Examiner rejected claims 1-20. By this response, Applicant cancels claims 1-20 and adds new claims 21-51. Upon entry of these amendments, claims 21-51 are pending in the present application and are believed to be in condition for allowance. These amendments do not introduce new matter and are fully supported by the original disclosure. In view of the foregoing amendments and the following remarks, Applicant respectfully requests consideration and allowance of all pending claims.

Double Patenting

In the office action, the claims were rejected on the ground of non-statutory double patenting as being unpatentable over claims in US Patent 12019461, US Patent 11726504, and US Patent 11294403. Without conceding the merits of this rejection solely to expedite allowance, applicant is filing a terminal disclaimer herewith to moot the issue. Applicant respectfully asks that the rejection be withdrawn.

Reservation of Arguments

Above, Applicant identifies reasons why the present rejections should not be applied to the pending claims. This explanation, however, should not be construed as an admission that other features of the claims beyond those discussed, including the combination of claim features, are taught or suggested by the cited art, or that the rejections are otherwise proper. In the interest of brevity, Applicant has refrained from providing an exhaustive explanation of every basis for allowing the claims. Accordingly, Applicant reserves the right to identify other grounds for overcoming the present rejections and the cited art, and Applicant reiterates that the amendments and arguments above are made without prejudice, including to rights available under the doctrine of equivalents.

Moreover, Applicant stresses that many terms in the claims are defined within the claim itself. Particularly where bespoke noun phrases are used, Applicant has sought to embed the characteristics of their referent relevant to the claim in the claim itself. As such, use of such noun phrases (e.g., those having a meaning particular to the document at hand)

should not be taken as an invitation to import limitations from the specification when the relevant limitations are already recited in the claim itself.

Conclusion

Applicant respectfully submits that all pending claims should be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: 13 December 2024

/Josh L Tucker/

Josh L Tucker
Registration No. 63809
Pillsbury Winthrop Shaw Pittman LLP
P.O. Box 10500
McLean, VA 22102
Phone 512-580-9628

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #
18/658,724RECEIPT DATE / TIME
12/13/2024 04:52:08 PM Z ETATTORNEY DOCKET #
034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 6780

FILED BY Stephanie Goodson

PATENT CENTER # 68369250

AUTHORIZED BY Joshua Tucker

CUSTOMER # 909

FILING DATE 05/08/2024

CORRESPONDENCE
ADDRESS -FIRST NAMED
INVENTOR Aaron Phillips

Payment Information

PAYMENT METHOD
DA / 033975PAYMENT TRANSACTION ID
E2024BCG53047664PAYMENT AUTHORIZED BY
Stephanie GoodsonPRE-AUTHORIZED ACCOUNT
033975PRE-AUTHORIZED CATEGORY
37 CFR 1.19 (Document supply fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
2202	EACH CLAIM IN EXCESS OF 20	40.00	11	440.00
TOTAL AMOUNT:				\$440.00

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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FIRST NAMED
INVENTOR Aaron Phillips

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Joshua Tucker

Documents

TOTAL DOCUMENTS: 3

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
034392-0579591 Response to Non-Final Office Action filed 13DEC2024.pdf	14	-	125 KB
034392-0579591 Response to Non-Final Office Action (1-1) filed 13DEC2024-A....pdf	1	Amendment/Request for Reconsideration-After Non- Final Rejection	98 KB
034392-0579591 Response to Non-Final Office Action (2-11) filed 13DEC2024-CLM.pdf	10	Claims	94 KB
034392-0579591 Response to Non-Final Office Action (12-14) filed 13DEC2024-REM.pdf	3	Applicant Arguments/Remarks Made in an Amendment	78 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
034392-0579591 Response to Non-Final Office Action filed 13DEC2024.pdf	733921DC254C83D4BE69DAFD7DE8921736FA3987CEDA46E0E2571DD1529E6634BA87C02DB1C156AB4851AEAFD3E2418BAC4CA4459F0F809C233E259BA47911AD
034392-0579591 Response to Non-Final Office Action filed 13DEC2024-A....pdf	03B32980F731D819D850BC04FA341BD545C3F519D3B7DC555A5465202D0F2D7D2997720E62BED86EBD03CFF56A5789B212019F059699F5AAAAE404E9873C9BB1
034392-0579591 Response to Non-Final Office Action filed 13DEC2024-CLM.pdf	0093E0C396B05BA4DCE247ED0905CA457771969DAA3D04B38A5EF4E84AE4E4221280A034E4CC376E6DD44B949358244AC3D6C8E37B45AF6DB78C27CA221CFDDD
034392-0579591 Response to Non-Final Office Action filed 13DEC2024-REM.pdf	D0051DF3CBE44F3627B4FE9E75D57C209D637D9857685F60AC53A9C7D1C5FC4CBC4D7640C5483C76125605988EFF2BBACA861DFB92C9152AEEEC17BD5FF6AED4

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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A PRIOR PATENT

APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
18658724	05/08/2024	Aaron Phillips	034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES



Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action



This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent interest
SitePro, Inc.	100%
Total	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

Application #	Filing Date
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as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

Patent #
12019461
11726504
11294403

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

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- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.



Terminal disclaimer fee under 37 CFR 1.20(d) included with Electronic Terminal Disclaimer request.

Applicant claims the following entity status:

Small

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I certify, in accordance with 37 CFR 1.4(d)(4) that I am: An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Signature	Name	Registration #
/Joshua Tucker/	Joshua Tucker	63809

* Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP 324.



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APPROVAL LETTER

APPLICATION #
18/658,724

FILING DATE
05/08/2024

APPLICANT/PATENT UNDER REEXAMINATION
Aaron Phillips

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Electronic terminal disclaimer filed on 12/13/2024

 Approved

This patent is subject to a Terminal Disclaimer

Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved



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APPLICATION #
18/658,724

RECEIPT DATE / TIME
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ATTORNEY DOCKET #
034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 6780

FILED BY Stephanie Goodson

PATENT CENTER # 68368988

FILING DATE 05/08/2024

CUSTOMER # 909

FIRST NAMED
INVENTOR Aaron Phillips

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Joshua Tucker

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	3	Terminal Disclaimer-Filed (Electronic)	45 KB
grantLetter.pdf	1	Terminal Disclaimer-Electronic- Approved	18 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
petition-request.pdf	5248CEB696AF06EFFA324E7BF67298833F0D9C147BFB6E487 92A9C8A670391D26C12DBA077B1633095A8C1B93CA3B3139D 2E7D1A8A30BA0BD5639D40C5B87587
grantLetter.pdf	CF2A8D752161AC16757164FBEEF5BD8627430AF89399015DF

064932062566BF21AA321B9A899B8B59C0FFB4B857A78511C9
49CD5154442CD5F029F892A8CD8DE

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APPLICATION # 18/658,724	RECEIPT DATE / TIME 12/13/2024 06:11:47 PM Z ET	ATTORNEY DOCKET # 034392-0579591
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Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	6780	FILED BY	Stephanie Goodson
PATENT CENTER #	68368988	AUTHORIZED BY	Joshua Tucker
CUSTOMER #	909	FILING DATE	05/08/2024
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Aaron Phillips

Payment Information

PAYMENT METHOD DA / 033975	PAYMENT TRANSACTION ID E2024BCI12028812	PAYMENT AUTHORIZED BY Joshua Tucker
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FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
2814	STATUTORY DISCLAIMER, INCLUDING TERMINAL DISCLAIMER	170.00	1	170.00
TOTAL AMOUNT:				\$170.00

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18658724
	Filing Date		2024-05-08
	First Named Inventor	Aaron Phillips	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	034392-0579591	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8301386	B1	2012-10-30	Redmond et al.	
	2	7591308	B2	2009-09-22	Bender, Robert E	
	3	4052703	A	1977-10-04	Collins et al.	
	4	8595652	B2	2013-11-26	Kevin A. Retlich	
	5	5732776	A	1998-03-31	Tubel et al.	
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	7	6192980	A	2001-02-27	Tubel et al.	
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	First Named Inventor	Aaron Phillips		
	Art Unit			
	Examiner Name			
	Attorney Docket Number	034392-0579591		

	9	6913083	B2	2005-07-05	Smith, David Randolph	
	10	7148812	B2	2006-12-12	Baggs, Christopher David	
	11	7289994	B2	2007-10-30	Nixon et al.	
	12	7845404	B2	2010-12-07	Mcstay et al.	
	13	7921916	B2	2011-04-12	Lovell et al.	
	14	7931090	B2	2011-04-26	Smedstad et al.	
	15	7958938	B2	2011-06-14	Crossley et al.	
	16	10030499	B2	2018-07-24	Paul J. Johnson	
	17	8131510	B2	2012-03-06	Wingky et al.	
	18	8179279	B2	2012-05-15	Voss, Robert K.	
	19	8290737	B2	2012-10-16	Davis, Julian R.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18658724	
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	First Named Inventor	Aaron Phillips		
	Art Unit			
	Examiner Name			
	Attorney Docket Number		034392-0579591	

	20	8312320	B2	2012-11-13	Almadi et al.	
	21	8373418	B2	2013-02-12	Davey, Peter John	
	22	8386059	B2	2013-02-26	Boone, Scott G.	
	23	8838413	B2	2014-09-16	Pablo Daniel Genta	
	24	8407716	B2	2013-03-26	Nixon, M.J. et al.	
	25	5727170	A	1998-03-10	Mitchell, R. et al.	
	26	6435022	B1	2002-08-20	Albuaijan; Tareq Nasser	
	27	4823749	A	1989-04-25	Eisenmann; Manfred	
	28	8208478	B2	2012-06-26	Robinson; Gerald Ian	
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	Art Unit			
	Examiner Name			
	Attorney Docket Number	034392-0579591		

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	32	7096092	B1	2006-08-22	Ramakrishnan; Terizhandur S.	
	33	6356205	B1	2002-03-12	Salvo, Joseph James	
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	36	5132904	A	1992-07-21	Lawrence R. Lamp	
	37	6985831	B2	2006-01-10	Ito, T. et al.	
	38	7146231	B2	2006-12-05	Schleiss, D. et al.	
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	Art Unit			
	Examiner Name			
	Attorney Docket Number		034392-0579591	

	42	7950464	B2	2011-05-31	Atencio, M.E. et al.	
	43	8176979	B2	2012-05-15	Albert G. Ollre	
	44	8204692	B2	2012-06-19	Arango, G. et al.	
	45	8600568	B2	2013-12-03	Thomas F. Smaidris	
	46	6795798	B2	2004-09-21	Eryurek, E. et al.	
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	49	8886482	B2	2014-11-11	Higgins, T.A. et al.	
	50	8903558	B2	2014-12-02	Jarrell, J.A. et al.	
	51	8908531	B2	2014-12-09	Arturo Maria	
	52	9013322	B2	2015-04-21	Roberson, A.L. et al.	

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	Attorney Docket Number	034392-0579591		

	53	9363336	B2	2016-06-07	Lawson et al.	
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	55	11726504	B2	2023-08-15	Phillips	
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	62	9898014	B2	2018-02-20	Phillips	
	63	10488871	B2	2019-11-26	Phillips	

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	Attorney Docket Number		034392-0579591	

	64	11175680	B2	2021-11-16	Phillips	
	65	11294403	B2	2022-04-05	Phillips	
	66	9360870	B2	2016-06-07	Lynch	
	67	8649907	B2	2014-02-11	Bulut Fethi Ersavas	
	68	8766806	B2	2014-07-01	Keith D. McDowell	
	69	7711486	B2	2010-05-04	Thigpen, B.L. et al.	

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20040231851	A1	2004-11-25	Silvers, David	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18658724	
	Filing Date		2024-05-08	
	First Named Inventor	Aaron Phillips		
	Art Unit			
	Examiner Name			
	Attorney Docket Number		034392-0579591	

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	Art Unit		
	Examiner Name		
	Attorney Docket Number	034392-0579591	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97(e) to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ A certification statement is not submitted herewith.

FEE

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

COPIES

☐ An identification of an earlier application pursuant to 37 CFR 1.98 (d) (1) is attached.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joshua Tucker/	Date (YYYY-MM-DD)	2024-12-18
Name/Print	Joshua Tucker	Registration Number	63809

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION #
18/658,724RECEIPT DATE / TIME
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034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 6780

FILED BY Stephanie Goodson

PATENT CENTER # 68422519

AUTHORIZED BY Joshua Tucker

CUSTOMER # 909

FILING DATE 05/08/2024

CORRESPONDENCE
ADDRESS -FIRST NAMED
INVENTOR Aaron Phillips

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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Date: December 18, 2024

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In re Patent Application of:	)	
Aaron Phillips	)	Confirmation No.: 6780
	)	
Serial No.: 18/658,724	)	Examiner: Everett, Christopher E.
	)	
Filed: May 8, 2024	)	Group Art Unit: 2116
	)	
For: REMOTE CONTROL OF FLUID-	)	Attorney Docket No.: 034392-0579591
HANDLING DEVICES	)	
	)	

INFORMATION DISCLOSURE STATEMENT

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Dear Commissioner:

To avoid overburdening the Examiner, Applicant notes the accompanying Information Disclosure Statement recites only references that were previously considered in the parent applications.

This is done to have the references listed in the cited references section of in the present patent, to simplify proving that they were considered. Applicant recognizes that the Examiner would have considered these references anyway, as required in MPEP 609.02, which states:

*The examiner will consider information which has been considered by the Office in a parent application (other than an international application; see subsection I., above) when examining: (A) a continuation application filed under **37 CFR 1.53(b)**, (B) a divisional application filed under **37 CFR 1.53(b)**, or (C) a continuation-in-part application filed under **37 CFR 1.53(b)**. A listing of the information need not be resubmitted in the continuing application unless the applicant desires the information to be printed on the patent.*

Applicant thanks the Examiner for the Office's careful attention to this application.

Respectfully submitted,

Date: December 18, 2024

/Joshua Tucker/
Joshua Tucker
Reg. No. 63809
Pillsbury Winthrop Shaw Pittman LLP
P.O. Box 10500
McLean, VA 22102

4885-7041-2424.v1



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/658,724

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034392-0579591

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PATENT # -

CONFIRMATION # 6780

FILED BY Stephanie Goodson

PATENT CENTER # 68422519

FILING DATE 05/08/2024

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FIRST NAMED
INVENTOR Aaron Phillips

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Documents

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DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
034392-0579591 IDS 18DEC2024.pdf	18	Information Disclosure Statement (IDS) Form (SB08)	1319 KB
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0437466_NFOA_08-13-14_NPL.pdf	38	Non Patent Literature	1326 KB
0437404_NFOA_03-07-13_NPL.pdf	42	Non Patent Literature	1574 KB
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Digest

DOCUMENT

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/658,724

RECEIPT DATE / TIME
01/06/2025 05:03:59 PM Z ET

ATTORNEY DOCKET #
034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 6780

FILED BY Stephanie Goodson

PATENT CENTER # 68619783

FILING DATE 05/08/2024

CUSTOMER # 909

FIRST NAMED
INVENTOR Aaron Phillips

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Joshua Tucker

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
petition-request.pdf	3	Terminal Disclaimer-Filed (Electronic)	44 KB
grantLetter.pdf	1	Terminal Disclaimer-Electronic- Approved	18 KB

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/658,724	01/06/2025 05:03:59 PM Z ET	034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	6780	FILED BY	Stephanie Goodson
PATENT CENTER #	68619783	AUTHORIZED BY	Joshua Tucker
CUSTOMER #	909	FILING DATE	05/08/2024
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Aaron Phillips

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
DA / 033975	E202516H04249829	Joshua Tucker

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
2814	STATUTORY DISCLAIMER, INCLUDING TERMINAL DISCLAIMER	170.00	1	170.00
TOTAL AMOUNT:				\$170.00

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New Applications Under 35 U.S.C. 111

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APPLICATION #	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET #
18658724	05/08/2024	Aaron Phillips	034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES



Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action



This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent interest
SITEPRO, LLC	100%
Total	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

Application #	Filing Date
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as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

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- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
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Applicant claims the following entity status:

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63809

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APPROVAL LETTER

APPLICATION #
18/658,724

FILING DATE
05/08/2024

APPLICANT/PATENT UNDER REEXAMINATION
Aaron Phillips

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Electronic terminal disclaimer filed on 01/06/2025



Approved

This patent is subject to a Terminal Disclaimer

Approved / Disapproved by: Electronic Terminal Disclaimer automatically approved

<i>Examiner-Initiated Interview Summary</i>	Application No. 18/658,724	Applicant(s) Phillips, Aaron		
	Examiner CHRISTOPHER E EVERETT	Art Unit 2116	AIA (First Inventor to File) Status No	Page 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	Title	Type
CHRISTOPHER E EVERETT	Primary Examiner	Telephonic
Josh Tucker, Reg. No. 63809	Attorney of Record	

Date of Interview: 06 January 2025

Issues Discussed:

Other

See Terminal Disclaimer filed on 1/6/2025

/Christopher E. Everett/ Primary Examiner, Art Unit 2116	
<p>Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04</p> <p>Please further see: MPEP 713.04 Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b) 37 CFR § 1.2 Business to be transacted in writing</p>	

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Search Notes 	Application/Control No. 18/658,724	Applicant(s)/Patent Under Reexamination Phillips, Aaron
	Examiner CHRISTOPHER E EVERETT	Art Unit 2116

CPC - Searched*		
Symbol	Date	Examiner
(G05D7/0676 or H04L67/02 or G05B19/0428 or G06F3/0484 or E21B47/00 or G05B9/02 or G05B2219/24015 or G05B2219/25204 or G05B2219/31369 or G05B2219/23472)	11/12/2024	CEE

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Search of (G05D7/0676 or H04L67/02 or G05B19/0428 or G06F3/0484 or E21B47/00 or G05B9/02 or G05B2219/24015 or G05B2219/25204 or G05B2219/31369 or G05B2219/23472) using text searches	11/12/2024	CEE
Search of 700/1,282,275,281,42 using text searches	11/12/2024	CEE
Search of DAV using inventor search	11/12/2024	CEE
Search of PE2E using applicant, inventor, and text searches	11/12/2024	CEE
Review of file histories and search histories for parent patent application numbers 18/212131; 17/681373; 17/513539 16/656319; 15/867077; 14/984422; 14/147190; 13/708557	11/12/2024	CEE
Update PE2E and subclass searches as described above	01/07/2025	CEE

/Christopher E. Everett/ Primary Examiner, Art Unit 2116	
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<i>Search Notes</i> 	Application/Control No. 18/658,724	Applicant(s)/Patent Under Reexamination Phillips, Aaron
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Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	Search of USPAT and USPGPUB using text searches	01/07/2025	CEE

/Christopher E. Everett/ Primary Examiner, Art Unit 2116	
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CPC						
Symbol					Type	Version
G05D	/	7	/	0676	F	2013-01-01
G05B	/	9	/	02	I	2013-01-01
E21B	/	47	/	00	I	2013-01-01
G05B	/	19	/	0428	I	2013-01-01
G06F	/	3	/	0484	I	2013-01-01
H04L	/	67	/	02	I	2013-01-01
G05B	/	2219	/	25204	A	2013-01-01
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G05B	/	2219	/	23472	A	2013-01-01
G05B	/	2219	/	24015	A	2013-01-01

CPC Combination Sets					
Symbol				Type	Set

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 31	
/Christopher E. Everett/ Primary Examiner, Art Unit 2116 (Primary Examiner) _____ (Date) _____		07 January 2025 O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification 	Application/Control No. 18/658,724	Applicant(s)/Patent Under Reexamination Phillips, Aaron
	Examiner CHRISTOPHER E EVERETT	Art Unit 2116

INTERNATIONAL CLASSIFICATION			
CLAIMED			
G05B9/02	/	9	/ 02

NON-CLAIMED			
/	/		

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	31	
/Christopher E. Everett/ Primary Examiner, Art Unit 2116 (Primary Examiner)	07 January 2025 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

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☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

NONE	Total Claims Allowed:					
(Assistant Examiner)	(Date)	31				
/Christopher E. Everett/ Primary Examiner, Art Unit 2116 (Primary Examiner)	07 January 2025 (Date)	<table><tr><td>O.G. Print Claim(s)</td><td>O.G. Print Figure</td></tr><tr><td>1</td><td>1</td></tr></table>	O.G. Print Claim(s)	O.G. Print Figure	1	1
O.G. Print Claim(s)	O.G. Print Figure					
1	1					

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18658724	
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	First Named Inventor	Aaron Phillips		
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	Examiner Name			
	Attorney Docket Number		034392-0579591	

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Attorney Docket Number	034392-0579591	

	20	Scott Oaks & Henry Wong, Java Threads, 2nd Edition, January 1999, ISBN: 1-56592-418-5, 332 pages.	☐
	21	Patrick Niemeyer & Jonathan Knudsen, Learning Java, 3rd Edition, May 2005, 978 pages.	☐
	22	John R. Hubbard, Ph.D., Theory and Problems of Fundamentals of Computing with C++, 1998, 31 pages.	☐
	23	SitePro, Inc. v. Waterbridge Resources, LLC, et al., Claim Construction Memorandum and Order, Civil No. 6:23-CV-115-ADA-DTG, Document 93, dated February 23, 2024, 123 pages.	☐
	24	Copy of Corrected Notice of Allowability for Application No. 18/212,131 (034392-0576394) dated May 23, 2024, pages 1-6.	☐
	25	Copy of Non-Final Office Action for Application No. 13/708,557 (034392-0437404) dated March 7, 2013, pages 1-42.	☐
	26	Copy of Final Office Action for Application No. 13/708,557 (034392-0437404) dated June 25, 2013, pages 1-56.	☐
	27	Copy of Advisory Action for Application No. 13/708,557 (034392-0437404) dated September 6, 2013, pages 1-3.	☐
	28	Copy of Notice of Allowance for Application No. 13/708,557 (034392-0437404) dated November 29, 2013, pages 1-13.	☐
	29	Copy of Non-Final Office Action for Application No. 14/147,190 (034392-0437466) dated August 13, 2014, pages 1-38.	☐
	30	Copy of Final Office Action for Application No. 14/147,190 (034392-0437466) dated March 18, 2015, pages 1-82.	☐

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		18658724
Filing Date		2024-05-08
First Named Inventor	Aaron Phillips	
Art Unit		
Examiner Name		
Attorney Docket Number	034392-0579591	

31	Copy of Notice of Allowance for Application No. 14/147,190 (034392-0437466) dated September 29, 2015, pages 1-13.	☐
32	Copy of Non-Final Office Action for Application No. 14/984,422 (034392-0444743) dated December 21, 2016, pages 1-38.	☐
33	Copy of Final Office Action for Application No. 14/984,422 (034392-0444743) dated March 31, 2017, pages 1-44.	☐
34	Copy of Notice of Allowance for Application No. 14/984,422 (034392-0444743) dated October 10, 2017, pages 1-44.	☐
35	Copy of Non-Final Office Action for Application No. 15/867,077 (034392-0456380) dated March 1, 2019, pages 1-21.	☐
36	Copy of Notice of Allowance for Application No. 15/867,077 (034392-0456380) dated July 18, 2019, pages 1-10.	☐
37	Copy of Non-Final Office Action for Application No. 16/656,319 (034392-0508266) dated February 23, 2021, pages 1-55.	☐
38	Copy of Notice of Allowance for Application No. 16/656,319 (034392-0508266) dated July 22, 2021, pages 1-9.	☐
39	Copy of Non-Final Office Action for Application No. 17/681,373 (034392-0567098) dated October 7, 2022, pages 1-13.	☐
40	Copy of Notice of Allowance for Application No. 17/681,373 (034392-0567098) dated March 17, 2023, pages 1-13.	☐
41	Copy of Non-Final Office Action for Application No. 18/212,131 (034392-0576394) dated February 6, 2024, pages 1-31.	☐

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number		18658724	
Filing Date		2024-05-08	
First Named Inventor	Aaron Phillips		
Art Unit			
Examiner Name			
Attorney Docket Number		034392-0579591	

If you wish to add additional non-patent literature document citation information please click the Add button

Add

EXAMINER SIGNATURE

Examiner Signature	/Christopher E. Everett/ (01/06/2025)	Date Considered	01/06/2025
--------------------	---------------------------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number		18658724	
Filing Date		2024-05-08	
First Named Inventor	Aaron Phillips		
Art Unit			
Examiner Name			
Attorney Docket Number		034392-0579591	

CERTIFICATION STATEMENT

Please see 37 CFR 1.97(e) to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ A certification statement is not submitted herewith.

FEE

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

COPIES

☐ An identification of an earlier application pursuant to 37 CFR 1.98 (d) (1) is attached.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Joshua Tucker/	Date (YYYY-MM-DD)	2024-12-18
Name/Print	Joshua Tucker	Registration Number	63809

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Bibliographic Data

Application No: 18/658,724

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged: /Christopher E. Everett/

Initials

Examiner's Signature

Title:

REMOTE CONTROL OF FLUID-HANDLING DEVICES

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
05/08/2024	700	2116	034392-0579591
RULE			

APPLICANTS

SitePro, Inc., Lubbock, TX, UNITED STATES

INVENTORS

Aaron Phillips, Lubbock, TX, UNITED STATES

CONTINUING DATA

This application is a CON of 18212131 06/20/2023 PAT 12019461

18212131 is a CON of 17681373 02/25/2022 PAT 11726504

17681373 is a CON of 17513539 10/28/2021 PAT 11294403

17513539 is a CON of 16656319 10/17/2019 PAT 11175680

16656319 is a CON of 15867077 01/10/2018 PAT 10488871

15867077 is a CON of 14984422 12/30/2015 PAT 9898014

14984422 is a CON of 14147190 01/03/2014 PAT 9342078

14147190 is a CON of 13708557 12/07/2012 PAT 8649909

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

05/28/2024

**** SMALL ENTITY ****

STATE OR COUNTRY

UNITED STATES

ADDRESS

Pillsbury Winthrop Shaw Pittman, LLP

PO Box 10500

McLean, VA 22102

UNITED STATES

FILING FEE RECEIVED

\$816



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

909 7590 01/23/2025
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

EXAMINER	
EVERETT, CHRISTOPHER E	
ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 01/23/2025

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/658,724	05/08/2024	Aaron Phillips	034392-0579591	6780

TITLE OF INVENTION: REMOTE CONTROL OF FLUID-HANDLING DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$516	\$0.00	\$0.00	\$516	04/23/2025

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/658,724	05/08/2024	Aaron Phillips	034392-0579591	6780

TITLE OF INVENTION: REMOTE CONTROL OF FLUID-HANDLING DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$516	\$0.00	\$0.00	\$516	04/23/2025

EXAMINER	ART UNIT	CLASS-SUBCLASS
EVERETT, CHRISTOPHER E	2116	700-083000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required)

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/658,724	05/08/2024	Aaron Phillips	034392-0579591	6780
<div>909 7590 01/23/2025</div> <div>Pillsbury Winthrop Shaw Pittman, LLP</div> <div>PO Box 10500</div> <div>McLean, VA 22102</div>				
<div>EXAMINER</div> <div>EVERETT, CHRISTOPHER E</div>				
<div>ART UNIT PAPER NUMBER</div> <div>2116</div>				
DATE MAILED: 01/23/2025				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).

<https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to:

- 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
- 2) a federal, state, local, or international agency, in response to its request;
- 3) a contractor of the USPTO having need for the information in order to perform a contract;
- 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
- 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
- 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
- 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
- 8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
- 9) the Office of Personnel Management (OPM) for personnel research purposes; and
- 10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 18/658,724	Applicant(s) Phillips, Aaron	
	Examiner CHRISTOPHER E EVERETT	Art Unit 2116	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/13/2024.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 21-51. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has **THREE MONTHS FROM THE "MAILING DATE"** of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in **ABANDONMENT** of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ **CORRECTED DRAWINGS** (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ **DEPOSIT OF and/or INFORMATION** about the deposit of **BIOLOGICAL MATERIAL** must be submitted. Note the attached Examiner's comment regarding **REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL**.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892) 2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date ____. 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material ____. 4. ☒ Interview Summary (PTO-413), Paper No./Mail Date ____.	5. ☐ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other ____.
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/Christopher E. Everett/
Primary Examiner, Art Unit 2116

DETAILED ACTION

The Office Action is responsive to the communication filed on 12/13/2024.

Claims 21-51 are pending.

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Allowable Subject Matter

Claims 21-51 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims 21-49

Regarding claim 21, the prior art as described in the prosecution history describes:

21. (new) A tangible, non-transitory, machine-readable medium storing instructions that, when executed by one or more processors, effectuate operations comprising:

However, regarding claim 21, the prior art as described in the prosecution history does not describe:

receiving, with a first computing system, via a network interface, a plurality of commands encoded in a first protocol to control a plurality of different fluid-handling devices at a fluid-handling site, different commands among the plurality of commands being directed to different fluid handling devices among the plurality of fluid-handling devices, wherein:

the plurality of commands are responsive to inputs to a command interface presented on a remote user computing device, and

the plurality of commands are received after determining that a user of the remote user computing device is authorized to issue commands to the first computing system based on a user account that indicates the user is authorized to issue commands to the first computing system, the user account being accessed from a data store;

for at least some of the plurality of commands, determining, with the first computing system, a plurality of different target states of a given one of the fluid-handling devices over time, wherein the first computing system is operative to maintain control of the fluid handling devices in an absence of an external network connection;

translating, with the first computing system, the plurality of commands into translated commands encoded in a plurality of protocols different from the first protocol, at least some of the translated commands being operative to cause a local controller of the given fluid-handling device to the plurality of different target states, and the local controller being responsive to the at least some of the translated commands and feedback

from the given fluid-handling device, the feedback being indicative of whether the given fluid-handling device is in targeted states among the plurality of different target states;

sending, with the first computing system, the translated commands to the local controllers;

obtaining, with the first computing system, site data and storing the site data in a report buffer of the first computing system such that the site data in the report buffer is not lost in the absence of the network connection, the site data including alarms, measurements from sensors, or other data associated with the fluid-handling site or associated with at least some of the plurality of fluid-handling devices;

sending, with the first computing system, the site data stored in the report buffer to a remote second computing system.

Dependent claims 22-49 depend from independent claim 21 and are allowable for the same reasons as described above.

Claim 50

Independent claim 50 is substantially similar to independent claim 21 and is allowable for the same reasons as outlined above with respect to claim 21.

Claim 51

Regarding claim 51, the prior art as described in the prosecution history describes:

51. (new) A system, comprising:
a fluid-handling site;
a plurality of fluid handling devices at the fluid-handling site; and
a first computing system communicatively coupled to the plurality of fluid
handling devices, the first computing system storing instructions that, when executed by
the first computing system, effectuate operations comprising:

However, regarding claim 51, the prior art as described in the prosecution history does
not describe:

receiving, with a first computing system, via a network interface, a

plurality of commands encoded in a first protocol to control a plurality of different fluid-handling devices at a fluid-handling site, different commands among the plurality of commands being directed to different fluid handling devices among the plurality of fluid-handling devices, wherein:

the plurality of commands are responsive to inputs to a command interface presented on a remote user computing device, and

the plurality of commands are received after determining that a user of the remote user computing device is authorized to issue commands to the first computing system based on a user account that indicates the user is authorized to issue commands to the first computing system, the user account being accessed from a data store;

for at least some of the plurality of commands, determining, with the first computing system, a plurality of different target states of a given one of the fluid-handling devices over time, wherein the first computing system is operative to maintain control of the fluid handling devices in an absence of an external network connection;

translating, with the first computing system, the plurality of commands into translated commands encoded in a plurality of protocols different from the first protocol, at least some of the translated commands being operative to cause a local controller of the given fluid-handling device to the plurality of different target states, and the local controller being responsive to the at least some of the translated commands and feedback from the given fluid-handling device, the feedback being indicative of whether the given fluid-handling device is in targeted states among the plurality of different target states;

sending, with the first computing system, the translated commands to the local controllers;

obtaining, with the first computing system, site data and storing the site data in a report buffer of the first computing system such that the site data in the report buffer is not lost in the absence of the network connection, the site data including alarms, measurements from sensors, or other data associated with the fluid-handling site or associated with at least some of the plurality of fluid-handling devices;

sending, with the first computing system, the site data stored in the report buffer to a remote command center server, wherein:

other user accounts in the data store indicate other users are not authorized to issue commands to the first computing system;

the other user accounts indicate the other users are authorized to view reports from the first computing system;

the site data stored in the report buffer comprises a sensor measurement of the fluid handling site and an alarm;

the site data is obtained while network access to the remote command center server is intermittently ceased, and wherein sending the site data occurs after network access to the remote command center server is intermittently ceased;

translating abstracts details of site-specific implementation of the first computing system;

a given command among the plurality of commands is configured to instruct the given fluid-handling device to adjust to attain another target state; and

the operations further comprise:

translating the given command to produce another translated command and sending the other translated command to the given fluid-handling device;

obtaining sensor data characterizing a response of the given fluid-handling device to the other translated command; and

determining, by the first computing system, to send a further command to the given fluid-handling device to make a further adjustment based on the sensor data characterizing the response.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER E EVERETT whose telephone number is (571)272-2851. The examiner can normally be reached Monday-Friday 8:00 am to 5:00 pm (Eastern).

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher E. Everett/
Primary Examiner, Art Unit 2116

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of:
Aaron Phillips, *et al.*
Application No.: 18/658,724

Confirmation Number: 6780

Group Art Unit: 2116

Filed: 08 May 2024

Examiner: Everett, Christopher E.

Title: REMOTE CONTROL OF FLUID-HANDLING DEVICES

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Mail Stop Issue Fee

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicant confirms with appreciation the receipt of the Notice of Allowability for this application.

Applicant recognizes that in accordance with M.P.E.P. § 1302.14, the statement of reasons for allowance need not set forth all of the details as to why the claims are allowed.

Consequently, Applicant may assert that the stated reasons for allowance are not the only reasons for which the claims are allowable. The claims may be allowable for other reasons as well.

In addition, Applicant does not concede that all of the limitations identified in the statement are necessary to distinguish the prior art of record or to satisfy the requirements of 35 U.S.C. § 112. In addition, the statement does not assert, and Applicant would not concede, that the stated reasons have any bearing on the patentability of claims in any other application directed to the disclosed subject matter.

In addition, Applicant notes that each dependent claim stands on its own and is allowable on its own merits. In particular, each dependent claim may be allowable on the basis of a combination of some of the features recited in the dependent claim and its base claim(s), which

combination of features may not include all of the limitations identified in the reasons for allowance.

These comments are being filed concurrently with payment of the Issue Fee. Please charge any fees, if any, associated with the submission of this paper to Deposit Account Number 033975 (Ref. No. 034392-0579591). The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

Date: 23 January 2025

/Joshua Tucker /
Joshua Tucker
Registration No. 63,809
Pillsbury Winthrop Shaw Pittman LLP
P.O. Box 10500
McLean, VA 22102
Phone 512-580-9628



UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC PAYMENT RECEIPT

APPLICATION #
18/658,724

RECEIPT DATE / TIME
01/23/2025 07:40:23 PM Z ET

ATTORNEY DOCKET #
034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 6780

FILED BY Nicole Banks

PATENT CENTER # 68888485

AUTHORIZED BY Joshua Tucker

CUSTOMER # 909

FILING DATE 05/08/2024

CORRESPONDENCE ADDRESS -

FIRST NAMED INVENTOR Aaron Phillips

Payment Information

PAYMENT METHOD
DA / 033975

PAYMENT TRANSACTION ID
E20251MJ40396002

PAYMENT AUTHORIZED BY
Nicole Banks

PRE-AUTHORIZED ACCOUNT
033975

PRE-AUTHORIZED CATEGORY
37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
2501	UTILITY ISSUE FEE	516.00	1	516.00
TOTAL AMOUNT:				\$516.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement

Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

Joshua Tucker	(Typed or printed name)
/Joshua Tucker/	(Signature)
23 January 2025	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/658,724	05/08/2024	Aaron Phillips	034392-0579591	6780

TITLE OF INVENTION: REMOTE CONTROL OF FLUID-HANDLING DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$516	\$0.00	\$0.00	\$516	04/23/2025

EXAMINER	ART UNIT	CLASS-SUBCLASS
EVERETT, CHRISTOPHER E	2116	700-083000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 Pillsbury Winthrop Shaw Pittman, LLP

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

SitePro, Inc.

Lubbock, TEXAS

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required)

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☒ Electronic Payment via the USPTO patent electronic filing system ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 033975

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Joshua Tucker/

Date 23 January 2025

Typed or printed name Joshua Tucker

Registration No. 67,565



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/658,724

RECEIPT DATE / TIME
01/23/2025 07:40:23 PM Z ET

ATTORNEY DOCKET #
034392-0579591

Title of Invention

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 6780

FILED BY Nicole Banks

PATENT CENTER # 68888485

FILING DATE 05/08/2024

CUSTOMER # 909

FIRST NAMED
INVENTOR Aaron Phillips

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY Joshua Tucker

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
034392-0579591 Issue Fee Transmittal filed 23JAN2025.pdf	1	Post Allowance Communication - Incoming	113 KB
034392-0579591 Comments on Reasons for Allowance filed 23JAN2025.pdf	2	Post Allowance Communication - Incoming	104 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
034392-0579591 Issue Fee Transmittal filed 23JAN2025.pdf	DC20CBFE0A78898BE5EE7CEA1CD6C2C7709E7EE57CF52CF 98B8A6D5D74C827030BFD750BB9ED0C7EEDCE4B26DF3477F 7B82C9ACBDEA0A89CD1887F0747647129

034392-0579591 Comments on
Reasons for Allowance filed
23JAN2025.pdf

6C05E2C228CD88D3ECF19342263D969D1B87F776889E4FEE5
40861D2AF530054EE2AC39FBE4E6BD407FB9D0649A0BACF4
A413B354B56908FAB523D18EC6497B8

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/658,724	06/03/2025	12321184	034392-0579591	6780

909 7590 05/21/2025
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at <https://patentcenter.uspto.gov/>. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at <https://certifiedcopycenter.uspto.gov/index.html>. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (<https://patentcenter.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site <https://patentcenter.uspto.gov> for additional inventors):

Aaron Phillips, Lubbock, TX;

APPLICANT(s) (Please see PATENT CENTER site <https://patentcenter.uspto.gov> for additional applicants):

SitePro, Inc., Lubbock, TX;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit [SelectUSA.gov](https://www.selectusa.gov).

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number		18658724	
Filing Date		2024-05-08	
First Named Inventor	Aaron Phillips		
Art Unit			
Examiner Name			
Attorney Docket Number		034392-0579591	

	37	20120209540	A1	2012-08-16	Richardson, N., et al.	
	38	20100312401	A1	2010-12-09	Gutierrez, F. M., et al.	
Change(s) applied to document, /B.A/ 5/29/2025	39	20140039697	A1	02/2014 2013-02-06	Weiler et al.	
	40	20130211546	A1	2013-08-15	Lawson et al.	
	41	20130201316	A1	2013-08-08	Binder et al.	
	42	20130133881	A1	2013-05-30	Boyles, G., et al.	

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Remove

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2008124765	WO	A1	2008-10-16	Lufkin Industries, Inc.		☐
	2	2008103487	WO	A1	2008-08-28	Schlumberger Technology Corporation et al.		☐
	3	2090943	EP	A1	2009-08-19	Acque Ingegneria S.r.l.		☐



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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18/658,724

05/08/2024

Aaron Phillips

034392-0579591

6780

909 7590 06/03/2025
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

EXAMINER

EVERETT, CHRISTOPHER E

ART UNIT

PAPER NUMBER

2116

NOTIFICATION DATE

DELIVERY MODE

06/03/2025

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket_ip@pillsburylaw.com



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.
18/658,724	03-Jun-2025	12321184

Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

EGRANT NOTIFICATION

Your electronic patent grant (eGrant) is now available, which can be accessed via Patent Center at <https://patentcenter.uspto.gov>

The electronic patent grant is the official patent grant under 35 U.S.C. 153. For more information, please visit <https://www.uspto.gov/electronicgrants>