Trials@uspto.gov
571-272-7822

Paper 9
Date: August 6, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

THE INTEGRATION GROUP OF AMERICAS, INC.,
Petitioner,

v.

SITEPRO, INC.,
Patent Owner.

IPR2024-00724 (Patent 8,649,909 B1), IPR2024-00737 (Patent 11,175,680 B2), IPR2024-00738 (Patent 9,342,078 B2), IPR2024-00739 (Patent 9,898,014 B2), IPR2024-00740 (Patent 11,726,504 B2), IPR2024-00741 (Patent 10,488,871 B2), and IPR2024-00742 (Patent 11,294,403 B2)[1]

Before WILLIAM V. SAINDON, KRISTEN L. DROESCH, LYNNE H. BROWNE, and KEVIN W CHERRY, *Administrative Patent Judges.*[2]

BROWNE, *Administrative Patent Judge*.

TERMINATION
Due to Settlement Prior to Institution of Trial
35 U.S.C. § 317; 37 C.F.R. § 42.74

[1] This Order is entered into each case. The parties are not authorized to use this joint heading and filing style in their papers.
[2] None of the above-listed proceedings have an expanded panel. Rather, the judges constitute the panels of all of these proceedings.

With the Board's authorization, the Parties filed a Joint Motion to Terminate the instant proceeding on the basis of a settlement reached by the Parties. *See* Paper 7[3] ("Mot."); 35 U.S.C. § 317(a); 37 C.F.R. §§ 42.72, 42.74. The Parties also filed a copy of their written Settlement Agreement (Exhibit 1010), along with a Joint Request (Paper 8) to treat the Agreement as business confidential information under 35 U.S.C. § 317(b) and 37 C.F.R. § 42.74(c).

Trial has not been instituted in these proceedings. In the Joint Motion to Terminate, the Parties represent that they have entered into an agreement that has settled their dispute. Mot. 2.

> As part of the Agreement, the parties have stipulated to dismiss, with prejudice, the only district court litigation between the parties involving the '909 patent, *SitePro, Inc. v. WaterBridge Resources, LLC, WaterBridge Operating, LLC*," *WaterBridge Holdings, LLC, WaterBridge Management, Inc., and the Integration Group of the Americas, Inc.* and all proceedings currently pending before the Patent Trial and Appeal Board.

Id. at 2–3.

The Parties further state that "the Agreement is filed separately and concurrently with this motion, as Exhibit 1010," and "there are no other agreements or understandings, oral or written, between them, including any collateral agreements, made in connection with, or in contemplation of, the

---

[3] For purposes of expediency, we cite to Papers and Exhibits filed in IPR2024-00724. Similar Papers and Exhibits were filed in IPR2024-00737, -00738, -00739, -00740, -00741, and -00742.

termination of this proceeding." Mot. 2. Under these circumstances, we determine that it is appropriate to terminate the instant proceeding.

In the Joint Request, the Parties request that the Settlement Agreement be treated as business confidential information and be kept separate from the file of the patents involved in these proceedings. Joint Request 1. After reviewing the Settlement Agreement between Petitioner and Patent Owner, we find that the Settlement Agreement contains business confidential information regarding the terms of settlement. We determine that good cause exists to treat the Settlement Agreement between Petitioner and Patent Owner as business confidential information pursuant to 35 U.S.C. § 317(b) and 37 C.F.R. § 42.74(c).

In consideration of the foregoing, it is hereby:

ORDERED that the Parties' request that the Settlement Agreement (Exhibit 1010) be treated as business confidential information, kept separate from the file of U.S. Patent No. 8,649,909 B1[4], and made available only to Federal Government agencies on written request, or to any person on a showing of good cause, under 35 U.S.C. § 317(b) and 37 C.F.R. § 42.74(c), is *granted*; and

FURTHER ORDERED that the joint motion to terminate is *granted* and the proceeding is hereby *terminated*.

[4] The same applies to each of the challenged patents in each of the other proceedings.

IPR2024-00724, Patent 8,649,909 B1
IPR2024-00737, Patent 11,175,680 B2
IPR2024-00738, Patent 9,342,078 B2
IPR2024-00739, Patent 9,898,014 B2
IPR2024-00740, Patent 11,726,504 B2
IPR2024-00741, Patent 10,488,871 B2
IPR2024-00742, Patent 11,294,403 B2

FOR PETITIONER:

Winston Huff
MUNSCH HARDT KOPF & HARR
whuff@munsch.com

FOR PATENT OWNER:

Babak Tehranchi
Marvin Tyler
Brianna Kadjo
Fareid Asphahani
Matthew Lutz
PERKINS COIE LLP
tehranchi-ptab@perkinscoie.com
tyler-ptab@perkinscoie.com
kadjo-ptab@perkinscoie.com
asphahani-ptab@perkinscoie.com
lutz-ptab@perkinscoie.com

Doc Code: MFEE.C.AD
Document Description: Maintenance Fee Address Change

PTO/AIA/47 (11-18)
Approved for use through 09/30/2021. OMB 0651-0016
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number.

"FEE ADDRESS" INDICATION FORM

Address to:
Mail Stop M Correspondence
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

-OR-

Fax to:
571-273-6500

INSTRUCTIONS: The issue fee must have been paid for the application(s) listed on this form. In addition, only an address represented by a Customer Number can be established as the fee address for maintenance fee purposes (hereafter, fee address). A fee address should be established when correspondence related to maintenance fees should be mailed to a different address than the correspondence address for the application.

When to check the first box below: If you have a Customer Number to represent the fee address.

When to check the second box below: If you have no Customer Number representing the desired fee address, in which case a completed Request for Customer Number (PTO/SB/125) must be attached to this form. For more information on Customer Numbers, see the Manual of Patent Examining Procedure (MPEP) § 403.

For the following listed application(s), please recognize as the "Fee Address" under the provisions of 37 CFR 1.363 the address associated with:

☑ Customer Number: 00197

OR

☐ The attached Request for Customer Number form (PTO/SB/125)

PATENT NUMBER (if known)	APPLICATION NUMBER
9,898,014	14/984,422

Completed by (check one):

☐ Applicant/Inventor

☑ Attorney or Agent of record 63,809 (Reg. No.)

☐ Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) is enclosed or was filed on _____ (Date)

/Joshua Tucker/
Signature

Joshua Tucker
Typed or printed name

512.580.9628
Requester's telephone number

April 18, 2019
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. If the assignee is a juristic entity, this form must be signed by a patent practitioner (attorney or agent) of record. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted

This collection of information is required by 37 CFR 1.363. The information is required to obtain or retain a benefit by the public, which is to indicate (and for the USPTO to process) a fee address. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 5 minutes to complete, including gathering, preparing, and submitting the completed 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 COMPLETED FORMS TO THE PREVIOUS ADDRESS. **SEND COMPLETED FORMS TO: Mail Stop M Correspondence, 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.

Electronic Acknowledgement Receipt	
EFS ID:	35767489
Application Number:	14984422
International Application Number:	
Confirmation Number:	1094
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Customer Number:	909
Filer:	Joshua L. Tucker/Jennifer Sallee
Filer Authorized By:	Joshua L. Tucker
Attorney Docket Number:	034392-0444743
Receipt Date:	18-APR-2019
Filing Date:	30-DEC-2015
Time Stamp:	15:19:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Maintenance Fee Address Change	0444743_FAIF.pdf	144748 cce7598543d93700ed2c54d1f898fbb43b1a3e28	no	1
Warnings:					

Information:	
Total Files Size (in bytes):	144748

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 a 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.

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.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/984,422	02/20/2018	9898014	034392-0444743	1094

909 7590 01/31/2018

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

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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 Application Information Retrieval (PAIR) WEB site (http://pair.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 Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

AmpliSine Labs, LLC., Lubbock, TX;
Aaron Phillips, 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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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 including the Patent, advance orders and notification of maintenance fees 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.

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

909 7590 10/10/2017
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Joshua L. Tucker	(Depositor's name)
/Joshua L. Tucker/	(Signature)
January 10, 2018	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

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	$480	$0	$0	$480	01/10/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
EVERETT, CHRISTOPHER E	2121	700-282000

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/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form 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 has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: AmpliSine Labs, LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Lubbock, TX

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

4a. The following fee(s) are submitted:
- ☑ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 033975 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29 — 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.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27 — 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.
- ☐ Applicant changing to regular undiscounted fee 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 L. Tucker/ Date January 10, 2018

Typed or printed name Joshua L. Tucker Registration No. 63809

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Attorney Docket: 034392-0444743

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of: Aaron Phillips	Confirmation Number: 1094
Application No.: 14/984,422	Group Art Unit: 2121
Filed: December 30, 2015	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. 034392-0444743). The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

Date: 10 January 2018

/Joshua Tucker/
Joshua Tucker
Reg. No. 63,809
Pillsbury Winthrop Shaw Pittman LLP
512-580-9628

Electronic Patent Application Fee Transmittal

Application Number:	14984422
Filing Date:	30-Dec-2015
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Filer:	Joshua L. Tucker/Kathryn Seeman
Attorney Docket Number:	034392-0444743

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	2501	1	480	480

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**480**

Electronic Acknowledgement Receipt	
EFS ID:	31456612
Application Number:	14984422
International Application Number:	
Confirmation Number:	1094
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Customer Number:	909
Filer:	Joshua L. Tucker/Kathryn Seeman
Filer Authorized By:	Joshua L. Tucker
Attorney Docket Number:	034392-0444743
Receipt Date:	10-JAN-2018
Filing Date:	30-DEC-2015
Time Stamp:	15:18:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$480
RAM confirmation Number	011118INTEFSW00001972033975
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	034392_0444743_Issue_Fee_Transmittal_filed_10JAN2018.pdf	87231 5a91bd55449f0f5cf101b0cc45eac70914eaee48	no	1
Warnings:					
Information:					
2	Post Allowance Communication - Incoming	034392_0444743_Comments_on_Reasons_for_Allowance_filed_10JAN2018.pdf	115630 7c9026d150e8562713c4430a4014f29960cbcd3f	no	2
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30543 80a024120e6449dd89189ea7ab30d31787a0752e	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	233404		

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.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a 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.
<u>National Stage of an International Application under 35 U.S.C. 371</u>
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.
<u>New International Application Filed with the USPTO as a Receiving Office</u>
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.

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 10/10/2017

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

EXAMINER	
EVERETT, CHRISTOPHER E	
ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 10/10/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

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	$480	$0	$0	$480	01/10/2018

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 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity 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 and an extra copy of the form should be submitted. 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), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (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 including the Patent, advance orders and notification of maintenance fees 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.

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

909 7590 10/10/2017
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

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 facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

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	$480	$0	$0	$480	01/10/2018

EXAMINER	ART UNIT	CLASS-SUBCLASS
EVERETT, CHRISTOPHER E	2121	700-282000

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/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form 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 has been filed for recordation as set forth in 37 CFR 3.11. 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. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — 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.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — 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.
- ❑ Applicant changing to regular undiscounted fee 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. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

909 7590 10/10/2017

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

EXAMINER	
EVERETT, CHRISTOPHER E	
ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 10/10/2017

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 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, 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. 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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

Notice of Allowability	Application No. 14/984,422	Applicant(s) PHILLIPS, AARON	
	Examiner Christopher E. Everett	Art Unit 2121	AIA (First Inventor to File) 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 *9/21/2017*.
   ☐ 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 *1-23*. 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 *PTO-2323 After-Final Consideration Pilot*.

/Christopher E. Everett/
Primary Examiner, Art Unit 2121

DETAILED ACTION

1. The Office Action is responsive to the communication filed on 9/21/2017.

2. The present application is being examined under the pre-AIA first to invent provisions.

3. Claims 1-23 are pending.

Allowable Subject Matter

4. Claims 1-23 are allowed.

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

Claims 1-23

Regarding claim 1, the prior art as described in the prosecution history describes:

A hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising:

- a computer-implemented datastore storing:
    - a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and
    - network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators;

- a computer-implemented facility-interface module or modules configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections; and

However, regarding claim 1, the prior art as described in the prosecution history does not describe:

- a computer-implemented web-interface module or modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices,
- wherein the system is configured to receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, identify a network address in the datastore corresponding to a facility at which the actuator is located, and send instructions with the facility-interface module or modules to the facility to actuate the actuator, and
- wherein: the plurality of accounts include a first account, a second account, a third account, and a fourth account;
    - the first account corresponds to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities;
    - the second account corresponds to a second group of oil or gas facilities, the first group being different from the second group, users of the second

account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities;

- the third account corresponds to the first group of oil or gas facilities, users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil or gas facilities; and
- the fourth account corresponds to the second group of oil or gas facilities, users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil or gas facilities.

Dependent claims 2-23 depend from independent claim 1 and are allowable for the same reasons as described above.

6. 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 on Monday through Friday from 8:00 am to 5:00 pm.

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, Kenneth Lo can be reached on 571-272-9774. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher E. Everett/
Primary Examiner, Art Unit 2121

AMENDMENTS TO THE CLAIMS

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

1. (currently amended) A hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising:

a computer-implemented datastore storing:

a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and

network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators;

a computer-implemented facility-interface module or modules configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections; and

a computer-implemented web-interface module or modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices,

wherein the system is configured to receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, identify a network address in the datastore corresponding to a facility at which the actuator is located, and send instructions with the facility-interface module or modules to the facility to actuate the actuator, and

wherein:

the plurality of accounts include a first account, a second account, a third

account, and a fourth account;

the first account corresponds to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities;

the second account corresponds to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities;

the third account corresponds to the first group of oil or gas facilities, users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil or gas facilities; and

the fourth account corresponds to the second group of oil or gas facilities, users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil or gas facilities.

2. (currently amended) The system of claim 1, wherein the sensors include a tank level sensor of a tank at one of the facilities, and wherein the datastore includes a record associating the tank with the facility, data from the tank being unavailable to users without an account associated with the tank, and wherein the accounts:

designate oil or gas facilities to which a given user is authorized to send the user command to actuate the actuator~~;~~

~~include a first account corresponding to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities; and~~

~~include a second account corresponding to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities~~.

3. (original) The system of claim 1, wherein the sensors include a level sensor of an oil/water separation tank at one of the facilities configured to indicate a level at which oil meets water, and wherein the datastore includes a record associating the tank with the facility.

4. (original) The system of claim 1, wherein the sensors include a leak detector at one of the facilities, and wherein the datastore includes a record associating the leak detector with the facility.

5. (original) The system of claim 1, wherein:

the web-interface module or modules comprises a web server; and

the facility-interface module or modules comprises a site server distinct from the web server.

6. (original) The system of claim 5, wherein:

the web server communicates with user devices via a first network port of a computing device executing the web server; and

the site server communicates with facilities via a second network port of the computing device, the second network port being different from the first network port.

7. (original) The system of claim 1, wherein:

the data store stores subscription information associated with at least some of the accounts.

8. (original) The system of claim 1, wherein the facility-interface module or modules comprise:

means for interfacing with a plurality of site controllers associated with the facilities.

9. (original) The system of claim 1, wherein the web-interface module or modules comprise:

means for sending instructions to present a control interface on the user devices.

10. (original) The system of claim 1, wherein the datastore stores accounts for more than one hundred facilities, and the web-interface module or modules are configured interface with more than one hundred user devices.

11. (original) The system of claim 1, wherein the facility-interface module or modules are configured to send pull requests to facilities to retrieve data buffered at the facilities.

12. (original) The system of claim 1, comprising:

a controller at one of the facilities communicatively coupled to an actuator or a sensor.

13. (previously presented) The system of claim 12, wherein the system is configured to instantiate at least four of the following as distinct threads from one another:

a thread configured to sends and receive data requests;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

14. (previously presented) The system of claim 12, , wherein the system is configured to instantiate at least two of the following as distinct threads from one another:

a thread configured to sends or receive data request;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

15. (original) The system of claim 12, wherein the controller is communicatively coupled to the actuator or sensor via a private local area network.

16. (original) The system of claim 12, wherein controller is communicatively coupled to the actuator or sensor via a frame-based carrier-sense multiple access protocol with collision detection.

17. (original) The system of claim 12, wherein controller is configured to periodically push buffered data to the facility-interface module or modules.

18. (original) The system of claim 12, comprising:

means for ensuring at least some data is not lost if network access ceases intermittently.

19. (original) The system of claim 12, comprising:

means for translating a command for an actuator from an input format to a format configured to effectuate changes in the actuator.

20. (original) The system of claim 19, comprising:

means for executing control routines implicated by translated commands on an individual actuator or sensor.

21. (original) The system of claim 12, comprising:

means for transmitting data to the facility-interface module or modules.

22. (original) The system of claim 12, comprising:

means for checking validity of a command.

23. (original) The system of claim 12, comprising:

an oil or gas facility communicatively coupled to the controller.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	Art Unit
	CHRISTOPHER E EVERETT	2121

CPC- SEARCHED		
Symbol	Date	Examiner

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 PALM using inventor search	12/9/2016	CEE
Search of Google patent using text searches	12/9/2016	CEE
Search of EAST using inventor, assignee, and text searches	12/9/2016	CEE
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	12/9/2016	CEE
Search of 700/1,282,275,281,42 using text searches	12/9/2016	CEE
Search of 702/6,13,183,188 using text searches	12/9/2016	CEE
Search of 709/224 using text searches	12/9/2016	CEE
Search of 166/336,363,250.1 using text searches	12/9/2016	CEE
Search of 340/853.3,853.2,856.3 using text searches	12/9/2016	CEE
Update of EAST and sub-class searches described above	3/23/2017	CEE
Search of Google patent using text searches	3/23/2017	CEE
Search of Google scholar using text searches	3/23/2017	CEE
Update of EAST and sub-class searches described above	9/26/2017	CEE

	/CHRISTOPHER E EVERETT/ Primary Examiner.Art Unit 2121

INTERFERENCE SEARCH			
US Class/ CPC Symbol	**US Subclass / CPC Group**	**Date**	**Examiner**
	Search of USPAT and USPGPUB using text searches	9/26/2017	CEE

	/CHRISTOPHER E EVERETT/ Primary Examiner.Art Unit 2121

AFCP 2.0 Decision	Application No.	Applicant(s)
	14/984,422	PHILLIPS, AARON
	Examiner	Art Unit
	Christopher E. Everett	2121

This is in response to the After Final Consideration Pilot request filed 21 September 2017.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

   ☐ An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.

   ☐ A non-broadening amendment to at least one independent claim was not submitted.

   ☐ A proper AFCP 2.0 request was submitted in response to the most recent final rejection.

   ☐ Other:

2. **Proper Request**

   A. After final amendment submitted with the request will not be treated under AFCP 2.0.
   The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

   ☐ The after final amendment will be treated under pre-pilot procedure.

   B. Updated search and/or completed additional consideration.
   The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

   ☒ 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.

   ☐ 2. The after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details.

   ☐ 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.

   ☐ 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.

   ☐ 5. Other:

   Examiner Note: Please attach an interview summary when necessary as described above.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	**Art Unit**
	CHRISTOPHER E EVERETT	2121

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

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

CLAIM		DATE								
Final	Original	12/09/2016	03/23/2017	09/26/2017						
	1	✓	✓	=						
	2	✓	✓	=						
	3	✓	✓	=						
	4	✓	✓	=						
	5	✓	✓	=						
	6	✓	✓	=						
	7	✓	✓	=						
	8	✓	✓	=						
	9	✓	✓	=						
	10	✓	✓	=						
	11	✓	✓	=						
	12	✓	✓	=						
	13	✓	✓	=						
	14	✓	✓	=						
	15	✓	✓	=						
	16	✓	✓	=						
	17	✓	✓	=						
	18	✓	✓	=						
	19	✓	✓	=						
	20	✓	✓	=						
	21	✓	✓	=						
	22	✓	✓	=						
	23	✓	✓	=						

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	**Art Unit**
	CHRISTOPHER E EVERETT	2121

CPC						
Symbol					**Type**	**Version**
G05D		7	/	0676	F	2013-01-01
G05B		2219	/	25204	A	2013-01-01
G05B		2219	/	31369	A	2013-01-01
E21B		47	/	00	I	2013-01-01
G05B		9	/	02	I	2013-01-01
G05B		2219	/	23472	A	2013-01-01
G05B		19	/	0428	I	2013-01-01
G05B		2219	/	24015	A	2013-01-01
G06F		3	/	0484	I	2013-01-01
H04L		67	/	02	I	2013-01-01
			/			
			/			
			/			
			/			
			/			

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	23	
/CHRISTOPHER E EVERETT/ Primary Examiner.Art Unit 2121	09/26/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	**Art Unit**
	CHRISTOPHER E EVERETT	2121

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
		G	0	5	D	7 / 00 (2006.01.01)						
CROSS REFERENCE(S)												
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)											

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	23	
/CHRISTOPHER E EVERETT/ Primary Examiner.Art Unit 2121	09/26/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	**Art Unit**
	CHRISTOPHER E EVERETT	2121

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	23	
/CHRISTOPHER E EVERETT/ Primary Examiner.Art Unit 2121	09/26/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	6153	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L2	7048	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L3	26662	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L4	1163	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L5	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L6	41281	L1 L2 L3 L4 L5	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L7	235216	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L8	3192542	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L9	65	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2017/09/26 08:06
L10	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2017/09/26 08:06
L11	11	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2017/09/26 08:06
L12	8	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2017/09/26 08:06
L13	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06

		(WO-2008124765-$).did.				
L14	0	L13 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L15	7	L13 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L16	6830	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L17	3457	L16 and pump	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L18	1296	L17 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L19	352	L18 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L20	6	L19 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L21	2051	L6 and L7	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L22	3028538	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L23	26427	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L24	977	L8 and L21	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L25	513	L24 and L22	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L26	540	L7 and L23	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L27	15	L25 and L26	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L28	22	L7 and L23 and L6	US-PGPUB; USPAT;	OR	ON	2017/09/26 08:06

			EPO			
L29	855191	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L30	15715	L29 and L7	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L31	201	L30 and L23	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L32	283	L9 L10 L11 L12 L14 L15 L20 L27 L28 L31	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L33	4113	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L34	22	L33 and L23 and L22	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L35	46	(US-20040262008-$ or US-20020161685-$ or US-20090055029-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$).did. or (US-7289994-$ or US-6801135-$ or US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L36	4	L35 and (network adj2 (address addresses))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L37	47	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06

		5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$).did. or (WO-2008124765-$).did.				
L38	29	L37 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L39	12	L38 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L40	51	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L41	20	L40 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L42	48	(US-20120029661-$ or US-20080077512-$ or US-20100179669-$ or US-20040125141-$ or US-20040075689-$ or US-20040064205-$ or US-20120041570-$ or US-20050027377-$ or US-20050027376-$ or US-20110173556-$ or US-20080208380-$ or US-20070179641-$ or US-20050120288-$ or US-20040186927-$ or US-20030233438-$ or US-20030225650-$ or US-20030107591-$ or US-20090327942-$ or US-20080189638-$ or US-20080125877-$ or US-20080065706-$ or US-20080065705-$ or US-20080034047-$ or US-20070239291-$).did. or (US-6931288-$ or US-7515977-$ or US-8677262-$ or US-8533619-$ or US-8356257-$ or US-7680546-$ or US-7526794-$ or US-6889096-$ or US-8516383-$ or US-7971151-$ or US-7783370-$ or US-7729792-$ or US-7526347-$ or US-7152072-$ or US-7117052-$ or US-7043311-$ or US-6834370-$ or US-6735596-$ or US-6442512-$ or US-6434500-$ or US-5631825-$ or US-6445963-$ or US-6522934-$ or US-6247020-$).did.	US-PGPUB; USPAT	OR	ON	2017/09/26 08:06

L43	24	L42 and (address addresses)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L44	17	L42 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L45	13	L43 and L44	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L46	6153	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L47	7048	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L48	26662	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L49	1163	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L50	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L51	41281	L46 L47 L48 L49 L50	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L52	92435	(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).cpc.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L53	131779	L52 L51	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L54	401	((web html) near4 (control controlling) near4 (actuator controller valve)).ab.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L55	21	L53 and L54	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L56	19	L54 and 700/$.ccls.	US-PGPUB;	OR	ON	2017/09/26 08:06

			USPAT; FPRS; EPO			
L57	35	L55 L56	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L58	54	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$ or US-20080077512-$ or US-20030052180-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$ or US-5805926-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/09/26 08:06
L59	2	L58 and (leak adj4 sensor)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L60	8	L58 and (private)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L61	6	L58 and (carrier)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L62	2	L58 and (validity)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L63	130	("5247447" | "5272642" | "5353229").PN. OR ("5546301").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/09/26 08:06
L64	22	L63 and thread	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L65	0	(thread near4 (actuator and sensor and synchronize and data))	US-PGPUB;	OR	ON	2017/09/26 08:06

			USPAT; FPRS; EPO			
L66	152	(thread near4 (actuator and sensor))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L67	10	L66 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L68	421	L32 L65 L67 L64 L59 L60 L61 L62 L57 L56 L55 L45 L44 L43 L41 L36 L38 L39 L34	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
L69	421	L68	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/09/26 08:06
S1	11	("20020161685" | "20020169645" | "20030004624" | "20030182463" | "20040088115" | "20040231851" | "20050108504" | "20060240818" | "20080208475" | "20100295673" | "20120316658").PN.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/22 08:35
S2	34	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/22 08:35
S3	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:35
S4	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:36
S5	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:39
S6	1	("20060149476").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:39
S7	1	("20060271299").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S8	1	("20030065447").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S9	1	("4594665").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S10	1	("20050092523").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:42
S11	1	("20060047527").PN.	US-PGPUB; USPAT;	OR	OFF	2013/02/22 08:42

			EPO			
S12	53	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11	US-PGPUB; USPAT; EPO	OR	ON	2013/02/22 08:54
S13	17	(US-20090260829-$ or US-20020112860-$ or US-20040262008-$ or US-20070107903-$ or US-20040251030-$).did. or (US-7000693-$ or US-6420976-$ or US-7967066-$ or US-RE41173-$ or US-7148812-$ or US-6768700-$ or US-7845404-$ or US-6913083-$ or US-4636934-$ or US-5732776-$ or US-4052703-$ or US-7958938-$ or US-4755943-$).did.	EPO; JPO; DERWENT	OR	ON	2013/02/22 09:01
S14	1	("7261162").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:05
S15	62	("5331318" | "5597042" | "5662165" | "5706892" | "5706896" | "5721538" | "5730219" | "5732776" | "5803167" | "5868201" | "5934371" | "5941307" | "5959547" | "5975204" | "5992250" | "6006832" | "6012015" | "6046685" | "6068053" | "6075462" | "6125938" | "6160492" | "6161618" | "6176312" | "6179057" | "6192980" | "6192988" | "6209640" | "6247536" | "6257332" | "6271766" | "6276454" | "6279660" | "6281489" | "6288975" | "6296066" | "6422315" | "6469636" | "6498988" | "6622799" | "6670880" | "6717501" | "6788980" | "6801135" | "6816082" | "6851444").PN. OR ("7261162").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/22 09:05
S16	1	("20040262008").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:05
S17	1	("7148812").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S18	1	("7958938").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S19	1	("7967066").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S20	1	("7845404").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S21	1	("6913083").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:09
S22	1	("20020112860").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:09
S23	1	("5732776").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:10
S24	1	("4052703").PN.	US-	OR	OFF	2013/02/22

			PGPUB; USPAT; EPO			09:11
S25	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:50
S26	0	S25 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:50
S27	7	S25 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:51
S28	4518	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:52
S29	2295	S28 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:53
S30	839	S29 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:53
S31	239	S30 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:54
S32	2	S31 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:54
S33	4284	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S34	5841	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S35	18470	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S36	767	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S37	463	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08

S38	29579	S33 S34 S35 S36 S37	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08
S39	168445	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08
S40	2119066	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:10
S41	1404	S38 and S39	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:10
S42	1837654	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:11
S43	579	S41 and (internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:11
S44	15604	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S45	642	S40 and S41	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S46	315	S45 and S42	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S47	337	S39 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S48	6	S46 and S47	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S49	2	("2010/0147510").URPN.	USPAT	OR	ON	2013/02/26 10:13
S50	62	("5331318" | "5597042" | "5662165" | "5706892" | "5706896" | "5721538" | "5730219" | "5732776" | "5803167" | "5868201" | "5934371" | "5941307" | "5959547" | "5975204" | "5992250" | "6006832" | "6012015" | "6046685" | "6068053" | "6075462" | "6125938" | "6160492" | "6161618" | "6176312" | "6179057" | "6192980" | "6192988" | "6209640" | "6247536" | "6257332" | "6271766" | "6276454" | "6279660" | "6281489" | "6288975" | "6296066" | "6422315" | "6469636" | "6498988" | "6622799" | "6670880" | "6717501" | "6788980" | "6801135" | "6816082" | "6851444").PN. OR ("7261162").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/26 10:14
S51	11	("5941305" | "5959547" | "5978749" | "6061603" | "6670880").PN. OR ("6801135").URPN.	US-PGPUB; USPAT;	OR	ON	2013/02/26 10:18

			USOCR			
S52	10	S39 and S44 and S38	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:21
S53	337	S39 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:22
S54	203	S53 and (internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:22
S55	387	(local autonomous independent) and S45	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:25
S56	381	S55 not S54	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:25
S57	501662	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:28
S58	8886	S57 and S39	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:29
S59	106	S58 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:29
S60	44	("20030004624" | "20040088115" | "20100147510" | "5732776" | "7931090" | "7967066" | "8312320" | "20130144531" | "8301386" | "20050108504" | "20100295673" | "20110231024" | "6061603" | "8386059" | "20100098507" | "20030182463" | "4052703" | "6192980" | "7958938" | "8373418" | "20130024026" | "20040231851" | "20060240818" | "7148812" | "7289994" | "20120316658" | "20040262008" | "7921916" | "8131510" | "8290737" | "20100326654" | "20020161685" | "20090149969" | "7845404" | "8179279" | "20020112860" | "20050096846" | "5149443" | "6801135" | "6913083" | "20130008645" | "20020169645" | "20080208475" | "7591308").PN.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/11 13:22
S61	37	(US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020161685-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6801135-$ or US-6061603-$ or US-6192980-$).did. or (WO-2008124765-	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:58

		$).did.				
S62	0	S61 and oscillate	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:58
S63	1	S61 and (stuck adj3 valve)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:59
S64	4400	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S65	5969	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S66	19220	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S67	804	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S68	475	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S69	30612	S64 S65 S66 S67 S68	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S70	172242	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S71	241	S69 and S70 and "240"	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S72	2175607	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S73	664	S69 and S70 and S72	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S74	6	S73 and (inoperative in-operative stuck) adj3 (valve part)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S75	94	S70 and (stuck) adj3 (valve)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:14
S76	94	S70 and ((stuck) adj3 (valve))	US-PGPUB; USPAT;	OR	ON	2013/06/12 08:14

			EPO			
S77	109	S70 and ((frozen froze stuck) adj3 (valve))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:19
S78	12	((move jerk oscillate move) near2 ((frozen froze stuck) adj3 (valve)))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:21
S79	1	("4823749").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/06/12 08:22
S80	1	("20010032518").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/06/12 10:53
S81	35	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/12 11:14
S82	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S83	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S84	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S85	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S86	0	S85 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S87	7	S85 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S88	4795	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S89	2432	S88 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S90	889	S89 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S91	246	S90 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14

S92	2	S91 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S93	1458	S69 and S70	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S94	1900176	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S95	16083	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S96	664	S72 and S93	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S97	327	S96 and S94	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S98	343	S70 and S95	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S99	6	S97 and S98	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S100	10	S70 and S95 and S69	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S101	528886	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S102	9459	S101 and S70	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S103	110	S102 and S95	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S104	158	S81 S82 S83 S84 S86 S87 S92 S99 S100 S103	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S105	16	("2004/0262008").URPN.	USPAT	OR	ON	2013/10/25 12:32
S106	9	("20040262008" | "20050035875" | "4701756" | "5959547" | "6229453" | "6816082").PN. OR ("7148812").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/25 12:39
S107	1	("5959547").PN.	US-PGPUB;	OR	OFF	2013/10/25 12:45

			USPAT; EPO			
S108	4578	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S109	6150	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S110	20349	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S111	850	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S112	486	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S113	32148	S108 S109 S110 S111 S112	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S114	177528	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S115	2253717	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S116	36	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/25 12:46
S117	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S118	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S119	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S120	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S121	0	S120 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S122	7	S120 and (oil near2 water)	US-PGPUB; USPAT;	OR	ON	2013/10/25 12:46

			EPO			
S123	4935	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S124	2501	S123 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S125	917	S124 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S126	257	S125 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S127	2	S126 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S128	1540	S113 and S114	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S129	1987225	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S130	16785	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S131	707	S115 and S128	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S132	351	S131 and S129	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S133	357	S114 and S130	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S134	6	S132 and S133	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S135	10	S114 and S130 and S113	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S136	553323	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S137	9948	S136 and S114	US-PGPUB; USPAT;	OR	ON	2013/10/25 12:46

			EPO			
S138	117	S137 and S130	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S139	166	S116 S117 S118 S119 S121 S122 S127 S134 S135 S138	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S140	166	S139	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S144	4914	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S145	6494	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S146	22712	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S147	948	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S148	511	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S149	35297	S144 S145 S146 S147 S148	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S150	188122	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S151	2416039	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S152	38	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/07/22 16:19
S153	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19
S154	2	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19
S155	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19
S156	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19

		20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.				
S157	0	S156 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S158	7	S156 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S159	5262	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S160	2663	S159 and pump	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S161	969	S160 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S162	268	S161 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S163	4	S162 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S164	1686	S149 and S150	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S165	2171012	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S166	18312	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S167	776	S151 and S164	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S168	390	S167 and S165	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S169	383	S150 and S166	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S170	8	S168 and S169	US-PGPUB; USPAT;	OR	ON	2014/07/22 16:19

			EPO			
S171	12	S150 and S166 and S149	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S172	605853	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S173	10936	S172 and S150	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S174	129	S173 and S166	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S175	178	S152 S153 S154 S155 S157 S158 S163 S170 S171 S174	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S176	178	S175	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S177	178	S176	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S178	2489	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:20
S179	645	S178 and S150	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S180	452	S179 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S182	15	S180 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S183	16	S178 and S166 and S165	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:29
S184	204	S182 S183 S177	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:29
S185	23	("4007450" | "4888726" | "5560005" | "5724575" | "5828851" | "5838563" | "5845230" | "5956483" | "6000045" | "6131120" | "6263487" | "6701437" | "6799077").PN. OR ("7289994").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/23 16:41
S186	1	("20090055029").PN.	US-PGPUB; USPAT;	OR	OFF	2015/03/06 14:23

			EPO			
S187	46	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6801135-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 14:45
S188	2	S187 and pid	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 14:45
S189	5307	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S190	6733	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S191	24915	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S192	1044	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S193	530	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S194	38241	S189 S190 S191 S192 S193	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S195	197343	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S196	2561451	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S197	39	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2015/03/06 16:10
S198	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO;	OR	ON	2015/03/06

			DERWENT			16:10
S199	2	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2015/03/06 16:10
S200	6	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2015/03/06 16:10
S201	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S202	0	S201 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S203	7	S201 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S204	5538	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S205	2804	S204 and pump	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S206	1031	S205 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S207	287	S206 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S208	4	S207 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S209	1822	S194 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S210	2334181	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S211	19758	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S212	846	S196 and S209	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S213	432	S212 and S210	US-PGPUB;	OR	ON	2015/03/06 16:10

			USPAT; EPO			
S214	411	S195 and S211	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S215	10	S213 and S214	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S216	17	S195 and S211 and S194	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S217	652812	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S218	11860	S217 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S219	139	S218 and S211	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S220	192	S197 S198 S199 S200 S202 S203 S208 S215 S216 S219	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S221	192	S220	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S222	192	S221	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S223	2737	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S224	706	S223 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S225	492	S224 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S226	16	S225 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S227	16	S223 and S211 and S210	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S228	219	S226 S227 S222	US-PGPUB;	OR	ON	2015/03/06 16:10

			USPAT; EPO			
S229	219	S228	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S230	5577	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S231	6864	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S232	25873	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S233	1107	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S234	547	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S235	39674	S230 S231 S232 S233 S234	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S236	205047	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S237	2685982	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S238	43	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/21 08:46
S239	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S240	3	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S241	6	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S242	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S243	0	S242 and (oil near2 water near2 separation)	US-PGPUB; USPAT;	OR	ON	2015/09/21 08:46

			EPO			
S244	7	S242 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S245	5794	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S246	2926	S245 and pump	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S247	1087	S246 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S248	297	S247 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S249	4	S248 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S250	1898	S235 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S251	2471267	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S252	21038	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S253	891	S237 and S250	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S254	452	S253 and S251	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S255	430	S236 and S252	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S256	10	S254 and S255	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S257	17	S236 and S252 and S235	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S258	692562	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT;	OR	ON	2015/09/21 08:46

			EPO			
S259	12566	S258 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S260	153	S259 and S252	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S261	210	S238 S239 S240 S241 S243 S244 S249 S256 S257 S260	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S262	210	S261	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S263	210	S262	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S264	2965	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S265	752	S264 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S266	523	S265 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S267	16	S266 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S268	18	S264 and S252 and S251	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S269	239	S267 S268 S263	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S270	239	S269	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S271	239	S270	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2015/09/21 08:46
S276	6137	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S277	7043	702/6,13,183,188.ccls.	US-PGPUB;	OR	ON	2016/12/07 16:13

			USPAT; EPO			
S278	26619	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S279	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S280	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S281	41214	S276 S277 S278 S279 S280	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S282	223345	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S283	2986529	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S284	60	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:13
S285	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S286	7	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S287	7	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S288	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S289	0	S288 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S290	7	S288 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S291	6407	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S292	3258	S291 and pump	US-PGPUB; USPAT;	OR	ON	2016/12/07 16:13

			EPO			
S293	1220	S292 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S294	338	S293 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S295	6	S294 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S296	2046	S281 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S297	2802086	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S298	24197	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S299	976	S283 and S296	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S300	511	S299 and S297	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S301	499	S282 and S298	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S302	15	S300 and S301	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S303	22	S282 and S298 and S281	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S304	788452	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S305	14396	S304 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S306	185	S305 and S298	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S307	262	S284 S285 S286 S287 S289 S290 S295 S302 S303 S306	US-PGPUB; USPAT;	OR	ON	2016/12/07 16:13

			EPO			
S308	262	S307	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S309	262	S308	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S310	3692	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S311	1005	S310 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S312	680	S311 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S313	20	S312 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S314	22	S310 and S298 and S297	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S315	293	S313 S314 S309	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S316	293	S315	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S317	293	S316	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S318	293	S317	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S319	81003	(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).cpc.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S320	46	(US-20040262008-$ or US-20020161685-$ or US-20090055029-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120310582-$ or US-	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13

		20010032518-$ or US-20140163749-$).did. or (US-7289994-$ or US-6801135-$ or US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.				
S321	4	S320 and (network adj2 (address addresses))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:19
S322	2	("20020018399").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:26
S323	13	("5941305" | "5959547" | "5978749" | "6061603" | "6670880").PN. OR ("6801135").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:27
S324	47	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:28
S325	29	S324 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:28
S326	12	S325 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:29
S327	2	("7096092").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:29
S328	1	("6967589").PN.	US-PGPUB; USPAT; FPRS;	OR	OFF	2016/12/07 16:31

			EPO			
S329	91	("5438329" | "5717718" | "5963650" | "6062095" | "6169488" | "6305471" | "6356205" | "6369715" | "6574652" | "6693553" | "6795319").PN. OR ("6967589").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:32
S330	47	S329 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:33
S331	23	S330 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:33
S332	2	("20090055029").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:34
S333	2	("20100033318").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:35
S334	51	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 12:05
S335	20	S334 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 12:05
S336	13	S335 and (address addresses)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 12:22
S337	48	(US-20120029661-$ or US-20080077512-$ or US-20100179669-$ or US-20040125141-$ or US-20040075689-$ or US-20040064205-$ or US-20120041570-$ or US-20050027377-$ or US-20050027376-$ or US-20110173556-$ or US-20080208380-$ or US-20070179641-$ or US-	US-PGPUB; USPAT	OR	ON	2016/12/08 12:28

		20050120288-$ or US-20040186927-$ or US-20030233438-$ or US-20030225650-$ or US-20030107591-$ or US-20090327942-$ or US-20080189638-$ or US-20080125877-$ or US-20080065706-$ or US-20080065705-$ or US-20080034047-$ or US-20070239291-$).did. or (US-6931288-$ or US-7515977-$ or US-8677262-$ or US-8533619-$ or US-8356257-$ or US-7680546-$ or US-7526794-$ or US-6889096-$ or US-8516383-$ or US-7971151-$ or US-7783370-$ or US-7729792-$ or US-7526347-$ or US-7152072-$ or US-7117052-$ or US-7043311-$ or US-6834370-$ or US-6735596-$ or US-6442512-$ or US-6434500-$ or US-5631825-$ or US-6445963-$ or US-6522934-$ or US-6247020-$).did.				
S338	24	S337 and (address addresses)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:31
S339	17	S337 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:31
S340	13	S338 and S339	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:32
S341	2230	(web html) near4 (control controlling) near4 (actuator controller valve)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:48
S342	6137	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S343	7043	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S344	26619	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S345	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S346	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S347	41214	S342 S343 S344 S345 S346	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S348	81068	(G05D7/0676 or H04L67/02 or G05B19/0428 or G06F3/0484 or E21B47/00 or G05B9/02 or G05B2219/24015 or G05B2219/25204 or	US-PGPUB; USPAT;	OR	ON	2016/12/08 13:48

		G05B2219/31369 or G05B2219/23472).cpc.	FPRS; EPO			
S349	120388	S348 S347	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:48
S350	155	S341 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:49
S351	145	S349 and S341	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:53
S352	387	((web html) near4 (control controlling) near4 (actuator controller valve)).ab.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:53
S353	20	S349 and S352	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S354	19	S352 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S355	34	S353 S354	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S356	2	("20020018399").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/08 14:01
S357	1	("5805926").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 08:48
S358	2	("20030052180").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 08:55
S359	1	("6967589").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 10:24
S360	54	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-	US-PGPUB; USPAT; EPO	OR	ON	2016/12/09 11:51

		20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$ or US-20080077512-$ or US-20030052180-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$ or US-5805926-$).did. or (WO-2008124765-$).did.				
S361	2	S360 and thread	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:51
S362	2	S360 and (leak adj4 sensor)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:51
S363	8	S360 and (private)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
S364	6	S360 and (carrier)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
S365	2	S360 and (validity)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
S366	1	("20020156837").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:11
S367	1	("6799195").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:15
S368	2	("20110051645").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:34
S369	3	("5546301").PN.	US-PGPUB; USPAT;	OR	OFF	2016/12/09 12:55

			FPRS; EPO			
S370	127	("5247447" | "5272642" | "5353229").PN. OR ("5546301").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/09 12:55
S371	21	S370 and thread	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 12:55
S372	38793	(thread near4 (actuator sensor gui synchronize data))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
S373	6873	(thread near4 (actuator sensor gui synchronize data)).ab.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
S374	6416	(thread near4 (actuator sensor gui synchronize data)).clm.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
S375	38793	S372 S373 S374	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
S376	11652	S373 S374	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
S377	625	S375 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
S378	157	S376 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
S379	0	(thread near4 (actuator and sensor and synchronize and data))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:02
S380	144	(thread near4 (actuator and sensor))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:02
S381	10	S380 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:02

S382	10	("6249241" | "5819271" | "6810386" | "5805082" | "5875305" | "6208938").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 12:39
S383	1	("6665568").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2017/03/23 14:01
S384	10	("5973696" | "5982362" | "6138150" | "6170007" | "6201996" | "6311101").PN. OR ("6665568").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/03/23 14:15
S385	6148	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S386	7044	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S387	26644	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S388	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S389	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S390	41251	S385 S386 S387 S388 S389	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S391	227637	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S392	3060500	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S393	62	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2017/03/23 14:18
S394	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2017/03/23 14:18
S395	9	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2017/03/23 14:18
S396	8	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2017/03/23 14:18
S397	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18

		20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.				
S398	0	S397 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S399	7	S397 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S400	6555	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S401	3329	S400 and pump	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S402	1245	S401 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S403	342	S402 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S404	6	S403 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S405	2046	S390 and S391	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S406	2883167	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S407	24993	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S408	976	S392 and S405	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S409	511	S408 and S406	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S410	514	S391 and S407	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S411	15	S409 and S410	US-PGPUB; USPAT;	OR	ON	2017/03/23 14:18

			EPO			
S412	22	S391 and S407 and S390	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S413	812457	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S414	14890	S413 and S391	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S415	190	S414 and S407	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S416	269	S393 S394 S395 S396 S398 S399 S404 S411 S412 S415	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S417	3859	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S418	22	S417 and S407 and S406	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S419	46	(US-20040262008-$ or US-20020161685-$ or US-20090055029-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$).did. or (US-7289994-$ or US-6801135-$ or US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S420	4	S419 and (network adj2 (address addresses))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S421	47	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18

		20140163749-$ or US-20090055029-$ or US-20020018399-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$).did. or (WO-2008124765-$).did.				
S422	29	S421 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S423	12	S422 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S424	51	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S425	20	S424 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S426	48	(US-20120029661-$ or US-20080077512-$ or US-20100179669-$ or US-20040125141-$ or US-20040075689-$ or US-20040064205-$ or US-20120041570-$ or US-20050027377-$ or US-20050027376-$ or US-20110173556-$ or US-20080208380-$ or US-20070179641-$ or US-20050120288-$ or US-20040186927-$ or US-20030233438-$ or US-20030225650-$ or US-20030107591-$ or US-20090327942-$ or US-20080189638-$ or US-20080125877-$ or US-20080065706-$ or US-20080065705-$ or US-20080034047-$ or US-20070239291-$).did. or (US-6931288-$ or US-7515977-$ or US-8677262-$ or US-8533619-$ or US-8356257-$ or US-7680546-$ or US-7526794-$ or US-6889096-$ or US-8516383-$ or US-7971151-$ or US-7783370-$ or US-7729792-$ or US-7526347-$ or US-7152072-$ or US-7117052-$ or US-	US-PGPUB; USPAT	OR	ON	2017/03/23 14:18

		7043311-$ or US-6834370-$ or US-6735596-$ or US-6442512-$ or US-6434500-$ or US-5631825-$ or US-6445963-$ or US-6522934-$ or US-6247020-$).did.				
S427	24	S426 and (address addresses)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S428	17	S426 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S429	13	S427 and S428	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S430	6148	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S431	7044	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S432	26644	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S433	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S434	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S435	41251	S430 S431 S432 S433 S434	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S436	86021	(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).cpc.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S437	125354	S436 S435	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S438	394	((web html) near4 (control controlling) near4 (actuator controller valve)).ab.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S439	20	S437 and S438	US-PGPUB; USPAT; FPRS;	OR	ON	2017/03/23 14:18

			EPO			
S440	19	S438 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S441	34	S439 S440	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S442	54	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$ or US-20080077512-$ or US-20030052180-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$ or US-5805926-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
S443	2	S442 and (leak adj4 sensor)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S444	8	S442 and (private)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S445	6	S442 and (carrier)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S446	2	S442 and (validity)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S447	129	("5247447" | "5272642" | "5353229").PN. OR ("5546301").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/03/23 14:18
S448	21	S447 and thread	US-PGPUB; USPAT; FPRS;	OR	ON	2017/03/23 14:18

			EPO			
S449	0	(thread near4 (actuator and sensor and synchronize and data))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S450	146	(thread near4 (actuator and sensor))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S451	10	S450 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S452	405	S416 S449 S451 S448 S443 S444 S445 S446 S441 S440 S439 S429 S428 S427 S425 S420 S422 S423 S418	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L70	0	(a computer-implemented web interface module modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices wherein the system is configured to receive with the web-interface module or modules a user command to actuate an actuator entered via a presented control interface identify a network address in the datastore corresponding to a facility at which the actuator is located and send instructions with the facility-interface module modules to the facility to actuate the actuator wherein the plurality of accounts include a first account a second account a third account and a fourth account the first account corresponds to a first group of oil gas facilities users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil gas facilities the second account corresponds to a second group of oil gas facilities the first group being different from the second group users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil gas facilities the third account corresponds to the first group of oil or gas facilities users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil gas facilities the fourth account corresponds to the second group of oil gas facilities users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil gas facilities).clm.	US-PGPUB; USPAT	AND	ON	2017/09/26 08:20

L71	0	(a computer-implemented web interface module modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices wherein the system is configured to receive with the web-interface module or modules a user command to actuate an actuator entered via a presented control interface identify a network address in the datastore corresponding to a facility at which the actuator is located and send instructions with the facility-interface module modules to the facility to actuate the actuator wherein the plurality of accounts include a first account a second account a third account and a fourth account the first account corresponds to a first group of oil gas facilities users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil gas facilities the second account corresponds to a second group of oil gas facilities the first group being different from the second group users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil gas facilities the third account corresponds to the first group of oil gas facilities users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil gas facilities the fourth account corresponds to the second group of oil gas facilities users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil gas facilities).clm.	US-PGPUB; USPAT	AND	ON	2017/09/26 08:20
L72	0	(actuate an actuator entered via a presented control interface identify a network address in the datastore corresponding to a facility at which the actuator is located and send instructions with the facility-interface module modules to the facility to actuate the actuator wherein the plurality of accounts include a first account a second account a third account and a fourth account the first account corresponds to a first group of oil gas facilities users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil gas facilities the second account corresponds to a second group of oil gas facilities the first group being different from the second group users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil gas facilities the third account corresponds to the first group of oil gas facilities users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil gas facilities the fourth account corresponds to the second group of oil gas facilities users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil gas facilities).clm.	US-PGPUB; USPAT	AND	ON	2017/09/26 08:20

L73	0	(a computer-implemented web interface module modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices wherein the system is configured to receive with the web-interface module or modules a user command to actuate an actuator entered via a presented control interface identify a network address in the datastore corresponding to a facility at which the actuator is located and send instructions with the facility-interface module modules to the facility to actuate the actuator wherein the plurality of accounts include a first account a second account a third account and a fourth account the first account corresponds to a first group of oil gas facilities users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil gas facilities the second account corresponds to a second group of oil gas facilities the first group being different from the second group users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil gas facilities the third account corresponds to the first).clm.	US-PGPUB; USPAT	AND	ON	2017/09/26 08:20
S141	0	(translating plurality commands translated commands encoded plurality protocols different from the first protocol each translated command being translated into a protocol among the plurality of protocols suitable for a fluid handling device to which the respective command is directed the at least some of the translated command being operative to cause a local controller of the given fluid-handling device to drive the given fluid-handling device to the plurality of different target states the local controller being responsive to the translated commands and feedback from the given fluid handling device indicative of whether the given fluid handling device is in a targeted state).clm.	US-PGPUB; USPAT	AND	ON	2013/10/25 13:15
S142	0	(translating plurality commands translated commands encoded plurality protocols different from the first protocol each translated command being translated into a protocol among the plurality of protocols suitable for a fluid handling device to which the respective command is directed the at least some of the translated command being operative to cause a local controller of the given fluid-handling device).clm.	US-PGPUB; USPAT	AND	ON	2013/10/25 13:16
S143	0	(sending the translated commands to respective local controllers of the respective fluid handling devices to which the respective commands are directed).clm.	US-PGPUB; USPAT	AND	ON	2013/10/25 13:16
S272	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions comprises after receiving the	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51

		instructions determining a plurality of different target states of the at least one of the fluid handling devices, the plurality of different states each corresponding to different times after determining the plurality of different target states translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols the one or more translated instructions including the determined plurality of different target states).clm.				
S273	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions comprises after receiving the instructions determining a plurality of different target states of the at least one of the fluid handling devices).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51
S274	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51
S275	0	(the plurality of different states each corresponding to different times after determining the plurality of different target states translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols the one or more translated instructions including the determined plurality of different target states).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51

9/26/2017 8:21:08 AM
C:\Users\ceverett\Documents\EAST\Workspaces\14984422-RemoteControlOilGas.wsp

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.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

909 7590 09/28/2017

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

EXAMINER	
EVERETT, CHRISTOPHER E	

ART UNIT	PAPER NUMBER
2121	

NOTIFICATION DATE	DELIVERY MODE
09/28/2017	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

Applicant-Initiated Interview Summary	**Application No.** 14/984,422	**Applicant(s)** PHILLIPS, AARON	
	Examiner Christopher E. Everett	**Art Unit** 2121	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Christopher E. Everett*. (3)_____.

(2) *Joshua Tucker, Reg. No. 63,809*. (4)_____.

Date of Interview: *20 September 2017*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☒103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1*.

Identification of prior art discussed: *See Continuation Sheet*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant's representative, Josh Tucker, and Examiner Christopher E. Everett discussed the technology within the patent application including the plurality of accounts. Applicant's representative and Examiner discussed proposed amendments to claim 1 (see attached) with respect to the overview of the technology and the cited prior art (Dwinnell, Schultz, Huhn, Peters, and Hott). Examiner agreed that the proposed amendments to claim 1 would overcome the cited prior art (Dwinnell, Schultz, Huhn, Peters, and Hott). Applicant's representative and Examiner discussed the need for additional consideration and/or search in view of the proposed amendments to claim 1.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the 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.

☒ Attachment

/Christopher E. Everett/ Primary Examiner, Art Unit 2121	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

———

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Identification of prior art discussed: U.S. Patent Publication No. 2002/0161685 (Dwinnell), U.S. Patent Publication No. 2002/0018399 (Schultz), U.S. Patent Publication No. 2003/0052180 (Huhn), U.S. Patent No. 6,967,589 (Peters), and U.S. Patent No. 6,665,568 (Hott)..

Do Not Enter
/CEE/

Draft Claims to Discuss for U.S. Patent App. 14984422

1. (currently amended) A hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising:

a computer-implemented datastore storing:

a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and

network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators;

a computer-implemented facility-interface module or modules configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections; and

a computer-implemented web-interface module or modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices,

wherein the system is configured to receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, identify a network address in the datastore corresponding to a facility at which the actuator is located, and send instructions with the facility-interface module or modules to the facility to actuate the actuator, and

wherein:

the plurality of accounts include a first account, a second account, a third account, and a fourth account;

the first account corresponds to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities;

the second account corresponds to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities;

the third account corresponds to the first group of oil or gas facilities, users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil or gas facilities; and

the fourth account corresponds to the second group of oil or gas facilities, users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil or gas facilities.

2. (currently amended) The system of claim 1, wherein the sensors include a tank level sensor of a tank at one of the facilities, and wherein the datastore includes a record associating the tank with the facility, data from the tank being unavailable to users without an account associated with the tank, and wherein the accounts:

designate oil or gas facilities to which a given user is authorized to send the user command to actuate the actuator~~;~~

~~include a first account corresponding to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities; and~~

~~include a second account corresponding to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities~~.

3. (original) The system of claim 1, wherein the sensors include a level sensor of an oil/water separation tank at one of the facilities configured to indicate a level at which oil meets water, and wherein the datastore includes a record associating the tank with the facility.

4. (original) The system of claim 1, wherein the sensors include a leak detector at one of the facilities, and wherein the datastore includes a record associating the leak detector with the facility.

5. (original) The system of claim 1, wherein:

the web-interface module or modules comprises a web server; and

the facility-interface module or modules comprises a site server distinct from the web server.

6. (original) The system of claim 5, wherein:

the web server communicates with user devices via a first network port of a computing device executing the web server; and

the site server communicates with facilities via a second network port of the computing device, the second network port being different from the first network port.

7. (original) The system of claim 1, wherein:

the data store stores subscription information associated with at least some of the accounts.

8. (original) The system of claim 1, wherein the facility-interface module or modules comprise:

means for interfacing with a plurality of site controllers associated with the facilities.

9. (original) The system of claim 1, wherein the web-interface module or modules comprise:

means for sending instructions to present a control interface on the user devices.

10. (original) The system of claim 1, wherein the datastore stores accounts for more than one hundred facilities, and the web-interface module or modules are configured interface with more than one hundred user devices.

11. (original) The system of claim 1, wherein the facility-interface module or modules are configured to send pull requests to facilities to retrieve data buffered at the facilities.

12. (original) The system of claim 1, comprising:

a controller at one of the facilities communicatively coupled to an actuator or a sensor.

13. (previously presented) The system of claim 12, wherein the system is configured to instantiate at least four of the following as distinct threads from one another:

a thread configured to sends and receive data requests;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

14. (previously presented) The system of claim 12, , wherein the system is configured to instantiate at least two of the following as distinct threads from one another:

a thread configured to sends or receive data request;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

15. (original) The system of claim 12, wherein the controller is communicatively coupled to the actuator or sensor via a private local area network.

16. (original) The system of claim 12, wherein controller is communicatively coupled to the actuator or sensor via a frame-based carrier-sense multiple access protocol with collision detection.

17. (original) The system of claim 12, wherein controller is configured to periodically push buffered data to the facility-interface module or modules.

18. (original) The system of claim 12, comprising:

means for ensuring at least some data is not lost if network access ceases intermittently.

19. (original) The system of claim 12, comprising:

means for translating a command for an actuator from an input format to a format configured to effectuate changes in the actuator.

20. (original) The system of claim 19, comprising:

means for executing control routines implicated by translated commands on an individual actuator or sensor.

21. (original) The system of claim 12, comprising:

means for transmitting data to the facility-interface module or modules.

22. (original) The system of claim 12, comprising:

means for checking validity of a command.

23. (original) The system of claim 12, comprising:

an oil or gas facility communicatively coupled to the controller.

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.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

909 7590 09/22/2017
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

EXAMINER	
EVERETT, CHRISTOPHER E	

ART UNIT	PAPER NUMBER
2121	

NOTIFICATION DATE	DELIVERY MODE
09/22/2017	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

Examiner-Initiated Interview Summary	**Application No.** 14/984,422	**Applicant(s)** PHILLIPS, AARON	
	Examiner Christopher E. Everett	**Art Unit** 2121	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Christopher E. Everett*. (3)_____.

(2) *Joshua Tucker, Reg. No. 63,809*. (4)_____.

Date of Interview: *19 September 2017*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☒103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1 and 2*.

Identification of prior art discussed: *See Continuation Sheet*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant's representative, Josh Tucker, and Examiner Christopher E. Everett discussed the technology within the patent application including the plurality of accounts. Applicant's representative and Examiner discussed the difference between the prior art and the technology. In particular, Applicant's representative and Examiner discussed how the prior art was directed to granting access to data from every well to a user with a sufficiently high level of access (Dwinnell) and the technology utilizes various user accounts with different authorizations for site interactions (e.g., commands, reports) (paragraph 0019 of the specification of the present application). Applicant's representative and Examiner discussed claims 1-2 with respect to the overview of the technology and the cited prior art (Dwinnell, Schultz, Huhn, Peters, and Hott). No agreement was reached with respect to the claims. However, Examiner agreed to review proposed claim amendments before submission of the response to the Office Action.

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.

☐ Attachment

/Christopher E. Everett/ Primary Examiner, Art Unit 2121	

Continuation of Identification of prior art discussed: U.S. Patent Publication No. 2002/0161685 (Dwinnell), U.S. Patent Publication No. 2002/0018399 (Schultz), U.S. Patent Publication No. 2003/0052180 (Huhn), U.S. Patent No. 6,967,589 (Peters), and U.S. Patent No. 6,665,568 (Hott).

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/984,422	Filing Date 12/30/2015	☐ To be Mailed

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 $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ 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 **09/21/2017**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 23	Minus	** 23	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 1	Minus	***3	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ 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.
** 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 number found in the appropriate box in column 1.

SLIE
THERESA OKON

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.

Doc Code: A.NE.AFCP
Document Description: After Final Consideration Pilot Program Request

PTO/SB/434 (05-13)

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

Practitioner Docket No.:	Application No.:	Filing Date:
034392-0444743	14/984,422	December 30, 2015
First Named Inventor:	**Title:**	
Aaron Phillips	REMOTE CONTROL OF FLUID-HANDLING DEVICES	

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.

1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (*e.g.*, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c).
2. The above-identified application contains an outstanding final rejection.
3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect.
4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection.
5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response.
6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web).
7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.]
8. By filing this certification and request, applicant acknowledges the following:

- Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0.
- The examiner will verify that the AFCP 2.0 submission is compliant, *i.e.*, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions:
  - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, by mailing an advisory action.
  - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview.
    - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate.
    - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.

Signature	Date
/Joshua Tucker/	September 21, 2017
Name (Print/Typed) Joshua Tucker	Practitioner Registration No. 63809

***Note**: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.*

[✓] * Total of 1 forms are submitted.

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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Aaron Phillips	§	
	§	Group Art Unit: 2121
	§	Confirmation No.: 1094
Serial No.: 14/984,422	§	Examiner: Everett, Christopher E
Filed: 30 December 2015	§	
	§	
For: Remote Control Of Fluid-Handling Devices	§	Atty. Docket: 034392-0444743
	§	

Mail Stop AF
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:

21 September 2017	/Joshua Tucker/
Date	Joshua Tucker

Commissioner:

AMENDMENT AND RESPONSE
TO FINAL OFFICE ACTION ISSUED ON 31 MARCH 2017

In response to the above-noted office action, Applicants amend and remark as follows.

Authorization for Extensions of Time and Payment of Fees

In accordance with 37 C.F.R. § 1.136, Applicants hereby provide 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. (currently amended) A hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising:

a computer-implemented datastore storing:

a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and

network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators;

a computer-implemented facility-interface module or modules configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections; and

a computer-implemented web-interface module or modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices,

wherein the system is configured to receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, identify a network address in the datastore corresponding to a facility at which the actuator is located, and send instructions with the facility-interface module or modules to the facility to actuate the actuator, and

wherein:

the plurality of accounts include a first account, a second account, a third

account, and a fourth account;

the first account corresponds to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities;

the second account corresponds to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities;

the third account corresponds to the first group of oil or gas facilities, users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil or gas facilities; and

the fourth account corresponds to the second group of oil or gas facilities, users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil or gas facilities.

2. (currently amended) The system of claim 1, wherein the sensors include a tank level sensor of a tank at one of the facilities, and wherein the datastore includes a record associating the tank with the facility, data from the tank being unavailable to users without an account associated with the tank, and wherein the accounts:

designate oil or gas facilities to which a given user is authorized to send the user command to actuate the actuator~~;~~

~~include a first account corresponding to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities; and~~

~~include a second account corresponding to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities~~.

3. (original) The system of claim 1, wherein the sensors include a level sensor of an oil/water separation tank at one of the facilities configured to indicate a level at which oil meets water, and wherein the datastore includes a record associating the tank with the facility.

4. (original) The system of claim 1, wherein the sensors include a leak detector at one of the facilities, and wherein the datastore includes a record associating the leak detector with the facility.

5. (original) The system of claim 1, wherein:

the web-interface module or modules comprises a web server; and

the facility-interface module or modules comprises a site server distinct from the web server.

6. (original) The system of claim 5, wherein:

the web server communicates with user devices via a first network port of a computing device executing the web server; and

the site server communicates with facilities via a second network port of the computing device, the second network port being different from the first network port.

7. (original) The system of claim 1, wherein:

the data store stores subscription information associated with at least some of the accounts.

8. (original) The system of claim 1, wherein the facility-interface module or modules comprise:

means for interfacing with a plurality of site controllers associated with the facilities.

9. (original) The system of claim 1, wherein the web-interface module or modules comprise:

means for sending instructions to present a control interface on the user devices.

10. (original) The system of claim 1, wherein the datastore stores accounts for more than one hundred facilities, and the web-interface module or modules are configured interface with more than one hundred user devices.

11. (original) The system of claim 1, wherein the facility-interface module or modules are configured to send pull requests to facilities to retrieve data buffered at the facilities.

12. (original) The system of claim 1, comprising:

a controller at one of the facilities communicatively coupled to an actuator or a sensor.

13. (previously presented) The system of claim 12, wherein the system is configured to instantiate at least four of the following as distinct threads from one another:

a thread configured to sends and receive data requests;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

14. (previously presented) The system of claim 12, , wherein the system is configured to instantiate at least two of the following as distinct threads from one another:

a thread configured to sends or receive data request;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

15. (original) The system of claim 12, wherein the controller is communicatively coupled to the actuator or sensor via a private local area network.

16. (original) The system of claim 12, wherein controller is communicatively coupled to the actuator or sensor via a frame-based carrier-sense multiple access protocol with collision detection.

17. (original) The system of claim 12, wherein controller is configured to periodically push buffered data to the facility-interface module or modules.

18. (original) The system of claim 12, comprising:

means for ensuring at least some data is not lost if network access ceases intermittently.

19. (original) The system of claim 12, comprising:

means for translating a command for an actuator from an input format to a format configured to effectuate changes in the actuator.

20. (original) The system of claim 19, comprising:

means for executing control routines implicated by translated commands on an individual actuator or sensor.

21. (original) The system of claim 12, comprising:

means for transmitting data to the facility-interface module or modules.

22. (original) The system of claim 12, comprising:

means for checking validity of a command.

23. (original) The system of claim 12, comprising:

an oil or gas facility communicatively coupled to the controller.

REMARKS

Applicants respectfully assert the that the present amendments place the present application in condition for allowance.

Interview Summary

On 19 September 2017 and 20 September 2017, Examiner Everett and Applicant's representative, Josh Tucker, had a teleconference to discuss this case. The presently presented claim amendments were discussed and the parties agreed that the amendments would overcome the art of record but that an additional search would be required. Applicants thank the Examiner for his careful attention to this case and for the thorough Examination of this and its parent cases.

Reservation of Arguments

Above, Applicants identify 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, Applicants have refrained from providing an exhaustive explanation of every basis for allowing the claims. Accordingly, Applicants reserve the right to identify other grounds for overcoming the present rejections and the cited art, and Applicants reiterate that the amendments and arguments above are made without prejudice, including to rights available under the doctrine of equivalents.

Conclusion

Applicants respectfully submit 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: 21 September 2017

/Joshua Tucker/

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

Electronic Patent Application Fee Transmittal				
Application Number:	14984422			
Filing Date:	30-Dec-2015			
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES			
First Named Inventor/Applicant Name:	Aaron Phillips			
Filer:	Joshua L. Tucker			
Attorney Docket Number:	034392-0444743			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	**Fee Code**	**Quantity**	**Amount**	**Sub-Total in USD($)**
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	2253	1	700	700
Miscellaneous:				
		Total in USD ($)		**700**

Electronic Acknowledgement Receipt	
EFS ID:	30435110
Application Number:	14984422
International Application Number:	
Confirmation Number:	1094
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Customer Number:	909
Filer:	Joshua L. Tucker
Filer Authorized By:	
Attorney Docket Number:	034392-0444743
Receipt Date:	21-SEP-2017
Filing Date:	30-DEC-2015
Time Stamp:	16:17:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$700
RAM confirmation Number	092217INTEFSW00002907033975
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	After Final Consideration Program Request	034392_0444743_After_Final_Consideration_Pilot_Program_Request_filed_21SEP2017.pdf	226501 fb681ba0a413ba451d8fd7b568c501273dcaf090	no	2
Warnings:					
Information:					
2		034392_0444743_Response_to_Final_Office_Action_filed_21SEP2017.pdf	151076 4889c6551803c5aaef44e86ee370d931cbe1e98c	yes	9

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Response After Final Action	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	9

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30599 a1ca4288221ec53cd56b8d3f1a06f15be4479adb	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	408176		

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 a 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.

Doc Code: ECOMM.AUTH/ECOMM.WTDW
Doc Description: Internet Communications Authorized/Internet Communications Authorization Withdrawn

PTO/SB/439 (11-15)

AUTHORIZATION FOR INTERNET COMMUNICATIONS IN A PATENT APPLICATION OR REQUEST TO WITHDRAW AUTHORIZATION FOR INTERNET COMMUNICATIONS

Application No.	14/984,422
Filing Date	December 30, 2015
First Named Inventor	Aaron Phillips
Art Unit	2121
Examiner Name	Everett, Christopher E
Practitioner Docket No.	034392-0444743

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

I. To authorize permission for Internet Communications.

☑ Recognizing that Internet communications are not secure, I hereby authorize the USPTO to communicate with the undersigned and practitioners in accordance with 37 CFR 1.33 and 37 CFR 1.34 concerning any subject matter of this application via video conferencing, instant messaging, or electronic mail. I understand that a copy of these communications will be made of record in the application file. (MPEP 502.03)

II. To withdraw authorization for Internet Communications.

☐ The authorization given on _____, to the USPTO to communicate with the undersigned and any practitioner in accordance with 37 CFR 1.33 and 37 CFR 1.34 concerning any subject matter of this application via Internet communications such as video conferencing, instant messaging, or electronic mail is hereby withdrawn. I understand that the withdrawal is effective when approved rather than when received.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 63809.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Joshua Tucker/ — Signature

September 14, 2017 — Date

Joshua Tucker — Typed or printed name

512-580-9628 — Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Juristic entities must be represented by a patent practitioner (see 37 CFR 1.31, which is applicable to any paper filed on or after September 16, 2012, that is presented on behalf of a juristic entity, regardless of application filing date). Submit multiple forms if more than one signature is required, see below*.

☑ * Total of 1 forms are submitted.

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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

Electronic Acknowledgement Receipt	
EFS ID:	30362235
Application Number:	14984422
International Application Number:	
Confirmation Number:	1094
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Customer Number:	909
Filer:	Joshua L. Tucker/Kathryn Seeman
Filer Authorized By:	Joshua L. Tucker
Attorney Docket Number:	034392-0444743
Receipt Date:	14-SEP-2017
Filing Date:	30-DEC-2015
Time Stamp:	12:18:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Internet Communications Authorized	034392_0444743_Authorization_for_Internet_Communications_filed_14SEP2017.pdf	80613 673a77470d8c7fbc999ccbdda125f0938ec02183	no	2
Warnings:					

Information:	
Total Files Size (in bytes):	80613

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 a 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.

PTO/AIA/31 (03-14)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

NOTICE OF APPEAL FROM THE EXAMINER TO THE PATENT TRIAL AND APPEAL BOARD

Docket Number (Optional): 034392-0444743

I hereby certify that this correspondence is being facsimile transmitted to the USPTO, EFS-Web transmitted to the USPTO, or deposited with the United States Postal Service with sufficient postage in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, on Alexandria, VA 22313-1450" [37 CFR 1.8(a)]
on July 28, 2017.
Signature /Joshua Tucker/
Typed or printed name Joshua Tucker

In re Application of: Aaron Phillips

Application Number	Filed
14/984,422	December 30, 2015

For: REMOTE CONTROL OF FLUID-HANDLING DEVICES

Art Unit	Examiner
2121	Everett, Christopher E

Applicant hereby **appeals** to the Patent Trial and Appeal Board from the last decision of the examiner.

The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) $ 800

☑ Applicant asserts small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by 50%, and the resulting fee is: $ 400

☐ Applicant certifies micro entity status. See 37 CFR 1.29. Therefore, the fee shown above is reduced by 75%, and the resulting fee is: $ _____
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 033975.

☑ Payment made via EFS-Web.

☑ A petition for an extension of time under 37 CFR 1.136(a) (PTO/AIA/22 or equivalent) is enclosed.
For extensions of time in reexamination proceedings, see 37 CFR 1.550.

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.

I am the

☐ applicant

☑ attorney or agent of record
Registration number 63809

☐ attorney or agent acting under 37 CFR 1.34
Registration number _____

Signature /Joshua Tucker/
Typed or printed name Joshua Tucker
Telephone Number 512-580-9628
Date July 28, 2017

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*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 41.20(b)(1) and 41.31. 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, 1.14 and 41.6. 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.

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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

PTO/AIA/22 (03-13)
Approved for use through 7/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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) 034392-0444743
Application Number 14/984,422	Filed December 30, 2015
For REMOTE CONTROL OF FLUID-HANDLING DEVICES	
Art Unit 2121	Examiner Everett, Christopher E

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.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	Micro Entity Fee	
☑ One month (37 CFR 1.17(a)(1))	$200	$100	$50	$ 100
☐ Two months (37 CFR 1.17(a)(2))	$600	$300	$150	$
☐ Three months (37 CFR 1.17(a)(3))	$1,400	$700	$350	$
☐ Four months (37 CFR 1.17(a)(4))	$2,200	$1,100	$550	$
☐ Five months (37 CFR 1.17(a)(5))	$3,000	$1,500	$750	$

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ 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.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 033975.

☑ Payment made via EFS-Web.

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.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 63809.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Joshua Tucker/	July 28, 2017
Signature	Date
Joshua Tucker	512-580-9628
Typed or printed name	Telephone Number

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*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). 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 6 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: Mail Stop PCT, 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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

Electronic Patent Application Fee Transmittal

Application Number:	14984422
Filing Date:	30-Dec-2015
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Filer:	Joshua L. Tucker/Kathryn Seeman
Attorney Docket Number:	034392-0444743

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
NOTICE OF APPEAL	2401	1	400	400
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Extension - 1 month with $0 paid	2251	1	100	100
Miscellaneous:				
		Total in USD ($)		**500**

Electronic Acknowledgement Receipt	
EFS ID:	29918452
Application Number:	14984422
International Application Number:	
Confirmation Number:	1094
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Customer Number:	909
Filer:	Joshua L. Tucker/Kathryn Seeman
Filer Authorized By:	Joshua L. Tucker
Attorney Docket Number:	034392-0444743
Receipt Date:	28-JUL-2017
Filing Date:	30-DEC-2015
Time Stamp:	15:45:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$500
RAM confirmation Number	073117INTEFSW00002227033975
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Notice of Appeal Filed	034392_0444743_Notice_of_Appeal_filed_28JUL2017.pdf	238361 cce4a32bbbdd5ac4b1c77f3eae72c774e89064c2	no	2
Warnings:					
Information:					
2	Extension of Time	034392_0444743_Petition_for_Extension_of_Time_filed_28JUL2017.pdf	163479 b7d94d4d97ae195d026c5cccad360241755e2a40	no	2
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32182 5dec7b3d53c89563a53d158e9566b511c75d83cd	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	434022		

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 a 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.

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.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

909 7590 03/31/2017

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

EXAMINER	
EVERETT, CHRISTOPHER E	

ART UNIT	PAPER NUMBER
2121	

NOTIFICATION DATE	DELIVERY MODE
03/31/2017	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

Office Action Summary	Application No. 14/984,422	Applicant(s) PHILLIPS, AARON	
	Examiner Christopher E. Everett	Art Unit 2121	AIA (First Inventor to File) Status No

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/21/2017*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ 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.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *1-23* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-23* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, 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.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *12/30/2015* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ 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)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

2. The Office Action is responsive to the communication filed on 3/21/2017.

3. Claims 1-23 are pending.

Response to Amendment

4. The amendment, filed 3/21/2017, is fully responsive.

5. The claim objections to claims 13-14 have been corrected and the objections have been removed.

Response to Arguments

6. Applicant's arguments with respect to claim 2 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection. In particular, Applicant's arguments are directed to Dwinnell, Schultz, Huhn, and Peters not teaching or suggesting "designate oil or gas facilities to which a given user is authorized to send the user command to actuate the actuator," as recited in claim 2. In the current rejection, Hott is utilized to teach this claim limitation with respect to the authorized user.

7. Applicant's arguments filed 3/21/2017 have been fully considered but they are not persuasive.

Regarding claims 1-23, the applicant argues that the cited references do not teach or suggest the claim limitations with respect to independent claim 1 below. Dependent claims 2-23 depend, directly or indirectly, from independent claim 1. The Examiner respectfully disagrees. The cited prior art describe the claim limitations as briefly outlined below and as described in the rejection of claim 1 below.

- "a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and" (see, e.g., Dwinnell: see the accounts and the **various ventures and wells** as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B; "Retrieval by web site users (investors and managers) of information and data stored in the archive system 302 or the database system 303 is controlled by standard authentication and authorization protocols. Users sign up for access to certain restricted features of the dynamic web site and receive a username and password to access desired information. Once a user has received an **account**, he is able to login into various otherwise-restricted web pages and thus be presented with a dynamically generated web page representative of the **level of access that the user's particular account possesses**." Paragraph 0057 (emphasis added))

Accordingly, applicant's arguments are not persuasive since the cited prior art describe the limitations in these claims.

In response to applicant's argument that Hugh is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Huhn is directed to using addresses to control actuators in a process control system ("A method and apparatus are provided for establishing an actuator address in a system (20) having plural actuators (50-54). A look-up table (122) stores all desired addresses corresponding to the plural actuators. An actuator of the plural actuators is actuated (310, 318) and at least one operating parameter (316, 324, 326) is determined. An address from the stored desired addresses is selected (328) from the look-up table of all addresses of the mounted actuator in response to the at least one operating parameter (316, 324, 326)." Abstract), Dwinnell is directed to a web based interface for oil and gas drilling location information, and Schultz is directed to a web server based interface for oil well information and control. These three references, Huhn, Dwinnell, and Schultz, are all directed to the same field of applicant's endeavor – a type of process control. Furthermore, the three references, Huhn, Dwinnell, and Schultz are also directed to the same problem – how to obtain information from and control process control systems. Accordingly, applicant's arguments are not persuasive since the cited prior art is directed to the same field of endeavor and to the same problem.

For at least these reasons, the rejection of the claims is maintained.

Claim Rejections - 35 USC § 103

8. 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 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.

9. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 5, 7-10, 12, 18-21, and 23 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn).

Claim 1:

Dwinnell describes a hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising: **(Dwinnell: "Embodiments of the present invention as disclosed collect live productivity data and streaming media information broadcast from remote sites of interest (such as oil and gas drilling locations, construction sites, etc.) in real-time into a collection and distribution network that delivers this data and information to investors and managers via the Internet via a dynamic web page interface." abstract)**

- a computer-implemented datastore storing: **(Dwinnell: see the database system 303 of the central system 102 as illustrated in figure 3 and as described in paragraph 0057)**
    - a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and **(Dwinnell: see the accounts and the various ventures and wells as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B; "Retrieval by web site**

users (investors and managers) of information and data stored in the archive system 302 or the database system 303 is controlled by standard authentication and authorization protocols. Users sign up for access to certain restricted features of the dynamic web site and receive a username and password to access desired information. Once a user has received an account, he is able to login into various otherwise-restricted web pages and thus be presented with a dynamically generated web page representative of the level of access that the user's particular account possesses." Paragraph 0057)

- a computer-implemented facility-interface module or modules configured to **(Dwinnell: see the central collection and distribution system 102 as illustrated in figures 1, 3 and as described in paragraph 0031)**
    - obtain data from the sensors at the facilities and **(Dwinnell: "Each remote site system 101 gathers information and data from a particular remote site (i.e., an oil and gas drilling site or rig) and transmits the information and data to a central collection and distribution system 102 at least partially in the form of streaming media, and preferably digital streaming video." Paragraph 0031)**
- a computer-implemented web-interface module or modules configured to **(Dwinnell: see the web platform system 305 of the central system 102 as illustrated in figure 3 and as described in paragraphs 0051, 0054)**
    - send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to **(Dwinnell: see the**

interfaces in web browsers along with delivered data from the web-server to the web browser as illustrated in figures 4, 5, 6A, 6B and as described in paragraphs 0063, 0064, 0065, 0066)

Dwinnell does not explicitly describe sending commands as described below. However, Schultz teaches the sending commands as described below.

- send commands to the actuators at the facilities via the cellular network connections; and **(see the sending of commands to actuators in Schultz and the use of a cellular network in Dwinnell; Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048; Dwinnell: "The remote site system 101 further includes a remote site transmission device 203 for connecting to and sending streaming media information and other data to the central system 102. Preferably, the transmission device 203 should be capable of 64 Kb/s or greater telecommunication bandwidth and can comprise a cellular or land-line high speed modem, microwave, ADSL, ISDN line, LAN/WAN, etc., and most**

preferably comprises a portable VSAT satellite receiver/transmitter and antenna." Paragraph 0044))

- receive commands to control actuators from the user computing devices, **(Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)**

- wherein the system is configured to
  - receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, **(Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)**
  - send instructions with the facility-interface module or modules to the facility to actuate the actuator. **(Schultz: "In addition, a corresponding one of the**

actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, with the known techniques of Schultz, namely, a web server based interface for oil well information and control, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells with the teachings of Schultz to use a web interface to view information and control devices in oil wells would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells of Dwinnell based on the teachings of remote control of oil wells in Schultz).

Dwinnell and Schultz do not explicitly describe network addresses as described below. However, Huhn teaches the network addresses as described below.

- network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators; **(see the stored network addresses for**

actuators in Huhn and the cell network communication in Dwinnell; Huhn: see the store address to eeprom 330 as illustrated in figure 9; "In accordance with a preferred embodiment of the present invention, the address for an actuator is stored in the EEPROM 130. As mentioned, each of the actuators of the system are identical." Paragraph 0042; Dwinnell: "The remote site system 101 further includes a remote site transmission device 203 for connecting to and sending streaming media information and other data to the central system 102. Preferably, the transmission device 203 should be capable of 64 Kb/s or greater telecommunication bandwidth and can comprise a cellular or land-line high speed modem, microwave, ADSL, ISDN line, LAN/WAN, etc., and most preferably comprises a portable VSAT satellite receiver/transmitter and antenna." Paragraph 0044)

- identify a network address in the datastore corresponding to a facility at which the actuator is located, and **(Huhn: see the find address in look-up table 328 as illustrated in figure 9; "An address from the stored desired addresses is selected (328) from the look-up table of all addresses of the mounted actuator in response to the at least one operating parameter (316, 324, 326)." Abstract; "Each of the actuators 50-54 have an associated address. When the HVAC controller 30 wants to command one of the actuators to move that actuator's associated conduit door, it transmits a two part serial communication signal on the command line 64 connected to all actuators. The first part of the serial communication is an actuator address for that**

actuator to be commanded. The second part of the serial communication is the command to further open or further close the conduit door. All other actuators ignore the command when the address portion of the serial communication does not match its stored address." Paragraph 0041)

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, and the known techniques of Schultz, namely, a web server based interface for oil well information and control, with the teachings of Huhn, namely, using addresses to control actuators in a process control system, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells and the teachings of Schultz to use a web interface to view information and control devices in oil wells with the teachings of Huhn to control actuators using addresses would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing of Dwinnell based on the teachings of remote control of oil wells in Schultz and the teachings of controlling actuators using addressing in Huhn).

Claim 5:

Dwinnell describes the system of claim 1, wherein:

- the web-interface module or modules comprises a web server; and **(Dwinnell: "The web platform system 305, comprising one or more web servers, communicates directly with each user's computer (running a web browser application) via the Internet and**

retrieves and serves, in a suitable hardware independent page description language (such as HTML, XML, and java), requested data from the database system 303, live streaming broadcasts and associated data from the broadcast system 304, and archived streams and associated data from the archive system 302." Paragraph 0054; see the web platform system 305 of the central system 102 as illustrated in figure 3 and as described in paragraphs 0051, 0054)

- the facility-interface module or modules comprises a site server distinct from the web server. **(Dwinnell: "Incoming streamed media is received by the central system transmission device 103 and sent directly to the collection system 301 where it is identified." Paragraph 0052; "Each of the systems 301-305 that comprise the central system 102 are composed of suitable servers, storage devices (including databases), memory devices and support hardware as is known in the art of computer networks to achieve the functions of each system 301-305." Paragraph 0051)**

Claim 7:

Dwinnell describes the system of claim 1, wherein: the data store stores subscription information associated with at least some of the accounts. **(Dwinnell: see the accounts and the various ventures and wells as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B; "Retrieval by web site users (investors and managers) of information and data stored in the archive system 302 or the database system 303 is controlled by standard authentication and authorization protocols. Users sign up for access to certain restricted features of the dynamic web site and receive a username and password to access desired**

information. Once a user has received an account, he is able to login into various otherwise-restricted web pages and thus be presented with a dynamically generated web page representative of the level of access that the user's particular account possesses." Paragraph 0057)

Claim 8:

Dwinnell describes the system of claim 1, wherein the facility-interface module or modules comprise: means for interfacing with a plurality of site controllers associated with the facilities. **(Dwinnell: see the central system transmission device 103 interfacing with the remote site systems 101 as illustrated in figure 1 and as described in paragraph 0034; "First, a continuous stream is sent from each remote site system 101 to the central collection and distribution system 102 via the central system transmission device 103 (such as a high speed modem, LAN, WAN or VSAT satellite transmitter/receiver)." Paragraph 0034)**

Claim 9:

Dwinnell describes the system of claim 1, wherein the web-interface module or modules comprise: means for sending instructions to present a control interface on the user devices. **(Dwinnell: see the interfaces in web browsers along with delivered data from the web-server to the web browser as illustrated in figures 4, 5, 6A, 6B and as described in paragraphs 0063, 0064, 0065, 0066)**

Claim 10:

Dwinnell describes the system of claim 1,

- wherein the datastore stores accounts for more than one hundred facilities, and **(Dwinnell: "As is apparent from FIG. 1, the network 100 can be expanded or contracted to include any number of remote site systems 101 or investors/managers 105 as is necessitated." Paragraph 0031)**
- the web-interface module or modules are configured interface with more than one hundred user devices. **(Dwinnell: "As is apparent from FIG. 1, the network 100 can be expanded or contracted to include any number of remote site systems 101 or investors/managers 105 as is necessitated." Paragraph 0031)**

Claim 12:

Dwinnell describes the system of claim 1, comprising: a controller at one of the facilities communicatively coupled to an actuator or a sensor. **(Dwinnell: "The remote site system 101 comprises a remote site video and data capture server 202 (hereinafter referred to as a remote site capture server 202 or "RSCS 202") in electronic communication with a plurality of cameras 205 positioned strategically about the remote site." Paragraph 0039)**

Claim 18:

Dwinnell describes the system of claim 12, comprising: means for ensuring at least some data is not lost if network access ceases intermittently. **(Dwinnell: "Preferably, the remote site system 101 also includes a storage medium (not explicitly shown in FIG. 2) for archiving a**

local copy of said collected data and streams such that such information and data will not be permanently lost in the case oc communication problems with the central system 100." Paragraph 0044)

Claim 19:

Dwinnell does not explicitly describe translating a command as described below. However, Schultz teaches the translating a command as described below.

Dwinnell and Schultz describe the system of claim 12, comprising: means for translating a command for an actuator from an input format to a format configured to effectuate changes in the actuator. **(Schultz: see the converter 26 converting optical signals into electrical signals for control of an actuator as illustrated in figures 1, 2 and as described in paragraphs 0032, 0042; "Accordingly, the well tool 10 includes a converter 26 for converting electrical signals generated by the webserver 22 into optical signals for transmission via the fiber optic line(s) of the cable 24." Paragraph 0032; "In a described embodiment, a well tool includes a webserver connected to a sensor and an actuator of the tool." Abstract; "The actuators 88, 90, 92 maybe electrically, hydraulically or otherwise operated." Paragraph 0042)**

Dwinnell and Schultz are combinable for the same rationale as set forth above with respect to claim 1.

Claim 20:

Dwinnell does not explicitly describe executing control routines as described below. However, Schultz teaches the executing control routines as described below.

Dwinnell and Schultz describe the system of claim 19, comprising: means for executing control routines implicated by translated commands on an individual actuator or sensor. **(Schultz: see the converter 26 converting optical signals into electrical signals for control of an actuator as illustrated in figures 1, 2 and as described in paragraphs 0032, 0042; "Accordingly, the well tool 10 includes a converter 26 for converting electrical signals generated by the webserver 22 into optical signals for transmission via the fiber optic line(s) of the cable 24." Paragraph 0032; "In a described embodiment, a well tool includes a webserver connected to a sensor and an actuator of the tool." Abstract; "The actuators 88, 90, 92 maybe electrically, hydraulically or otherwise operated." Paragraph 0042; "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)**

Dwinnell and Schultz are combinable for the same rationale as set forth above with respect to claim 1.

Claim 21:

Dwinnell describes the system of claim 12, comprising: means for transmitting data to the facility-interface module or modules. **(Dwinnell: "Each remote site system 101 gathers information and data from a particular remote site (i.e., an oil and gas drilling site or rig)**

and transmits the information and data to a central collection and distribution system 102 at least partially in the form of streaming media, and preferably digital streaming video." Paragraph 0031)

Claim 23:

Dwinnell describes the system of claim 12, comprising: an oil or gas facility communicatively coupled to the controller. **(Dwinnell: "Embodiments of the present invention as disclosed collect live productivity data and streaming media information broadcast from remote sites of interest (such as oil and gas drilling locations, construction sites, etc.) in real-time into a collection and distribution network that delivers this data and information to investors and managers via the Internet via a dynamic web page interface." abstract)**

12. Claim 2 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn), U.S. Patent No. 6,967,589 (Peters), and U.S. Patent No. 6,665,568 (Hott).

Claim 2:

Dwinnell, Schultz, and Huhn do not explicitly describe tank sensors as described below. However, Peters teaches the tank sensors as described below.

Dwinnell, Schultz, Huhn, and Peters describe the system of claim 1,

- wherein the sensors include a tank level sensor of a tank at one of the facilities, and **(Peters: "Monitoring unit 120, connected to oil tank 95, measures the pressure at the bottom of the tank. With that information, as well as the diameter of the oil tank 95 and the specific gravity of the oil in the oil tank 95, the amount of oil in oil tank 95 can be determined by a formula as is known to those of skill in the art. Likewise, monitoring unit 130, connected to water tank 98, measures the pressure at the bottom of water tank 98. With that information, as well as the diameter of the water tank 98 and the specific gravity of water, the amount of water in water tank 98 can be determined by a formula as is known to those of skill in the art. In each case, additional sensors can be used, e.g., trip level sensors in the tanks. Other methods of measuring can be used, such as, infrared, microwave and float sensors." Col. 5, line 61 through col. 6, line 7)**
- wherein the datastore includes a record associating the tank with the facility, **(see the tanks in Peters and the association of ventures to wells in Dwinnell; Peters: see the tanks 95, 98 as illustrated in figure 1; Dwinnell: see the ventures (i.e., facility) and the associated wells (i.e., equipment) as illustrated in figure 6A and as described in paragraph 0067)**

- data from the tank being unavailable to users without an account associated with the tank. **(see the tanks in Peters and the availability and unavailability of data for accounts in Dwinnell; Peters: see the tanks 95, 98 as illustrated in figure 1; Dwinnell: see the accounts and the various ventures and wells as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B; "Retrieval by web site users (investors and managers) of information and data stored in the archive system 302 or the database system 303 is controlled by standard authentication and authorization protocols. Users sign up for access to certain restricted features of the dynamic web site and receive a username and password to access desired information. Once a user has received an account, he is able to login into various otherwise-restricted web pages and thus be presented with a dynamically generated web page representative of the level of access that the user's particular account possesses." Paragraph 0057)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Peters, namely, monitoring a gas/oil well, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Peters to use tank sensors to monitor a gas/oil well would have been recognized by those of ordinary skill in

the art as resulting in an improved monitoring and control system (i.e., remote monitoring using sensors and control of oil wells using actuator addressing of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of monitoring an oil/gas well with tank sensors in Peters).

Dwinnell, Schultz, Huhn, and Peters do not explicitly describe accounts with authorization to send commands as described below. However, Hott teaches the accounts with authorization to send commands as described below.

- and wherein the accounts: **(Dwinnell: see the accounts and the various ventures and wells as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B; "Retrieval by web site users (investors and managers) of information and data stored in the archive system 302 or the database system 303 is controlled by standard authentication and authorization protocols. Users sign up for access to certain restricted features of the dynamic web site and receive a username and password to access desired information. Once a user has received an account, he is able to login into various otherwise-restricted web pages and thus be presented with a dynamically generated web page representative of the level of access that the user's particular account possesses." Paragraph 0057)**
    - designate oil or gas facilities to which a given user is authorized to send the user command to actuate the actuator; **(see the authentication of particular users to control components in Hott and the control of actuators in Schultz; Hott: see**

the authentication of users and authorization of only select users (e.g., owners of the well) to control components as described in col. 4, line 38 through col. 5, line 10; "The IW-DDCS may have alternate levels of access which it provides to various clients. Some clients may only be allowed access to certain components of IW-DDCS depending upon their status. For example, individuals wishing to monitor production rates for the purpose of determining whether or not to invest in a well may be given access to view only production data from a well, whereas, a client who owned a well may be given access to both the monitoring components of IW-DDCS as well as the control components of IW-DDCS." Col. 5, lines 1-10; Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)

- include a first account corresponding to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities; and **(see the various accounts associated with different remote sites in Dwinnell, the authentication of particular users to control components in Hott, and the**

control of actuators in Schultz; Hott: "The IW-DDCS may have alternate levels of access which it provides to various clients. Some clients may only be allowed access to certain components of IW-DDCS depending upon their status. For example, individuals wishing to monitor production rates for the purpose of determining whether or not to invest in a well may be given access to view only production data from a well, whereas, a client who owned a well may be given access to both the monitoring components of IW-DDCS as well as the control components of IW-DDCS." Col. 5, lines 1-10; Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048; Dwinnell: see the accounts and the various ventures and wells as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B)

- include a second account corresponding to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities **(see the various accounts associated with different remote sites in Dwinnell, the authentication of particular users**

to control components in Hott, and the control of actuators in Schultz; Hott: "The IW-DDCS may have alternate levels of access which it provides to various clients. Some clients may only be allowed access to certain components of IW-DDCS depending upon their status. For example, individuals wishing to monitor production rates for the purpose of determining whether or not to invest in a well may be given access to view only production data from a well, whereas, a client who owned a well may be given access to both the monitoring components of IW-DDCS as well as the control components of IW-DDCS." Col. 5, lines 1-10; Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048; Dwinnell: see the accounts and the various ventures and wells as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B)

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, the teachings of Huhn, namely, using addresses to control actuators in a process control system,

and the teachings of Peters, namely, monitoring a gas/oil well, with the teachings of Hott, namely, an internet wide distributed data control system, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, the teachings of Huhn to control actuators using addresses, and the teachings of Peters to use tank sensors to monitor a gas/oil well with the teachings of Hott to have authorized accounts to control components would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring using sensors and control of oil wells using actuator addressing and various accounts of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, the teachings of monitoring an oil/gas well with tank sensors in Peters, and the teachings of various users having access and control of oil field components in Hott).

13. Claim 3 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent No. 5,149,443 (Varnam).

Claim 3:

Dwinnell, Schultz, and Huhn do not explicitly describe oil/water sensors as described below. However, Varnam teaches the oil/water sensors as described below.

Dwinnell, Schultz, Huhn, and Peters describe the system of claim 1,

- wherein the sensors include a level sensor of an oil/water separation tank at one of the facilities configured to indicate a level at which oil meets water, and **(Varnam: "Also mounted on the floating arms 50 and 52 is at least one acoustical type oil layer thickness sensor 158. Sensor 158 acts to sense and determine the thickness of the oil layer lying within the defined oil collection area 54." Col. 6, lines 4-8)**
- wherein the datastore includes a record associating the tank with the facility. **(see the tanks in Varnam and the association of ventures to wells in Dwinnell; Varnam: see the tanks 200 as illustrated in figure 1; Dwinnell: see the ventures (i.e., facility) and the associated wells (i.e., equipment) as illustrated in figure 6A and as described in paragraph 0067)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Varnam, namely, an oil recovery system with an oil/water sensor, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control

devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Varnam to use an oil/water sensor would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring using various sensors and control of oil wells using actuator addressing of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of using an oil/water sensor in Varnam).

14. Claim 4 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent No. 7,967,066 (McStay).

Claim 4:

Dwinnell, Schultz, and Huhn do not explicitly describe a leak detector as described below. However, McStay teaches the leak detector as described below.

Dwinnell, Schultz, Huhn, and McStay describe the system of claim 1,

- wherein the sensors include a leak detector at one of the facilities, and (**McStay: see the leak detection sensors 320 as illustrated in figure 3**)

- wherein the datastore includes a record associating the leak detector with the facility. **(see the leak detector in McStay and the association of ventures to wells in Dwinnell; McStay: see the leak detection sensors 320 as illustrated in figure 3; Dwinnell: see the ventures (i.e., facility) and the associated wells (i.e., equipment) as illustrated in figure 6A and as described in paragraph 0067)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of McStay, namely, leak detection in an oil well, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of McStay to use a leak detection sensor in an oil well would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring using various sensors and control of oil wells using actuator addressing of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of using a leak detector in an oil well in McStay).

15. Claims 6 and 15 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent Publication No. 2002/0156837 (Batke).

Claim 6:

Dwinnell, Schultz, and Huhn do not explicitly describe two ports as described below. However, Batke teaches the two ports as described below.

Dwinnell, Schultz, Huhn, and Batke describe the system of claim 5, wherein:

- the web server communicates with user devices via a first network port of a computing device executing the web server; and **(Batke: see the web server communication by the web access interface 30 via the internet interface 32 (i.e., first network port) as illustrated in figure 1 and as described in paragraph 0020; "Referring to FIG. 1, a new industrial control system 100 used to control an industrial process includes a web access interface 30 that is coupled to one or more control devices, which are shown as control devices 110, 120, 130 and 140. The web access interface 30 is capable of communications with one or more remote computer terminals or other remote devices 10 by way of the Internet or World Wide Web (or simply the "web") by way of an Internet interface 32. The web access interface 30 is also coupled to**

the control devices 110-140 by way of a control network interface 62 having one or more ports, which in this exemplary embodiment are shown to include a first port 60 and a second port 70. Communication links 80 in turn couple the network interface 62 with the control devices 110-140." Paragraph 0020)

- the site server communicates with facilities via a second network port of the computing device, the second network port being different from the first network port. **(Batke: see the control device 110-140 communication by the web access interface 30 via the control network interface 62 (i.e., second network port) as illustrated in figure 1 and as described in paragraph 0020; "Referring to FIG. 1, a new industrial control system 100 used to control an industrial process includes a web access interface 30 that is coupled to one or more control devices, which are shown as control devices 110, 120, 130 and 140. The web access interface 30 is capable of communications with one or more remote computer terminals or other remote devices 10 by way of the Internet or World Wide Web (or simply the "web") by way of an Internet interface 32. The web access interface 30 is also coupled to the control devices 110-140 by way of a control network interface 62 having one or more ports, which in this exemplary embodiment are shown to include a first port 60 and a second port 70. Communication links 80 in turn couple the network interface 62 with the control devices 110-140." Paragraph 0020)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control,

and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Batke, namely, a process control system with a web server, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Batke to have various network configurations for the control device in the control system would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing and various ports for communication of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of multiple ports for communication within the process control system in Batke).

Claim 15:

Dwinnell, Schultz, and Huhn do not explicitly describe a private network as described below. However, Batke teaches the private network as described below.

Dwinnell, Schultz, Huhn, and Batke describe the system of claim 12, wherein the controller is communicatively coupled to the actuator or sensor via a private local area network. **(Batke: see the communication links 80 between the web access interface 30 and the control devices 110-140 as illustrated in figure 1 and as described in paragraphs 0020, 0029, 0031; "The communication links 80 can be wire cable, fiber optic or wireless, and are typically a proprietary or specialized network suitable for industrial control." Paragraph 0020)**

Dwinnell, Schultz, Huhn, and Batke are combinable for the same rationale as set forth above with respect to claim 6.

16. Claims 11 and 17 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent No. 6,967,589 (Peters).

Claim 11:

Dwinnell, Schultz, and Huhn do not explicitly describe pull requests as described below. However, Peters teaches the pull requests as described below.

Dwinnell, Schultz, Huhn, and Peters describe the system of claim 1, wherein the facility-interface module or modules are configured to send pull requests to facilities to retrieve data buffered at the facilities. **(Peters: "Relay unit 140 can query each, some or all of the monitoring units 100, 110, 120 and 130 or receive data and requests from each, some or all of them." Col. 6, lines 32-35)**

Dwinnell, Schultz, Huhn, and Peters are combinable for the same rationale as set forth above with respect to claim 2.

Claim 17:

Dwinnell, Schultz, and Huhn do not explicitly describe pushes as described below. However, Peters teaches the pushes as described below.

Dwinnell, Schultz, Huhn, and Peters describe the system of claim 12, wherein controller is configured to periodically push buffered data to the facility-interface module or modules. **(Peters: "Relay units may be configured to do any of these "wake ups" and to alter their alarm time intervals. This allows given periods for daily data dumps from monitoring units to the host interface 200 via the relay unit 240 and/or host interface 200 queries to monitoring units via the relay unit 240, both at any time interval. Preferably, the default setting for the relay unit 240 is to commence data dumps to the host interface at twelve (12) AM (midnight) each day and to wake up and await for host interface queries every 30 minutes for 2 minutes." Col. 10, lines 30-39)**

Dwinnell, Schultz, Huhn, and Peters are combinable for the same rationale as set forth above with respect to claim 2.

17. Claims 13-14 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of

U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent Publication No. 2005/0084988 (Huang).

Claim 13:

Dwinnell, Schultz, and Huhn do not explicitly describe threads as described below. However, Huang teaches the threads as described below.

Dwinnell, Schultz, Huhn, and Huang describe the system of claim 12, wherein the system is configured to instantiate at least four of the following as distinct threads from one another:

- a thread configured to sends and receive data requests; **(Huang: see the trace data collection tread receiving start/stop triggered by events from the machine control thread and sending trace data to the trace data store as illustrated in figure 5; "For the status data path 506, an independently executing thread obtains all sensor and/or actuator data from the various I/O module controllers to be passed along to user interface module 508 for display." Paragraph 0075)**
- a thread configured to synchronize other threads with updated information; **(Huang: see the trace data report thread updating the status data collection thread with data from the trace data store and the event driven data as illustrated in figure 5 and as described in paragraph 0076)**
- a thread configured to set a target state of actuators; **(Huang: see the machine control thread as illustrated in figure 5; "In one embodiment, the execution thread for**

collecting the trace data may have a higher priority even than the control thread that controls the actuators (which is also shown in FIG. 5)." Paragraph 0076)

- a thread configured to obtain updated sensor readings; **(Huang: see the status data collection thread as illustrated in figure 5; "For the status data path 506, an independently executing thread obtains all sensor and/or actuator data from the various I/O module controllers to be passed along to user interface module 508 for display." Paragraph 0075)**
- a thread configured to process user interactions; and
- a thread that eliminates other threads upon detecting a problem with the eliminated threads.

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Huang, namely, using various threads in a process control system, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Huang to use various threads in a process control system would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing and

various threads for control of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of using various threads for control in a process control system in Huang).

Claim 14:

Dwinnell, Schultz, and Huhn do not explicitly describe threads as described below. However, Huang teaches the threads as described below.

Dwinnell, Schultz, Huhn, and Huang describe the system of claim 12, wherein the system is configured to instantiate at least two of the following as distinct threads from one another:

- a thread configured to sends or receive data request; **(Huang: see the trace data collection tread receiving start/stop triggered by events from the machine control thread and sending trace data to the trace data store as illustrated in figure 5; "For the status data path 506, an independently executing thread obtains all sensor and/or actuator data from the various I/O module controllers to be passed along to user interface module 508 for display." Paragraph 0075)**
- a thread configured to synchronize other threads with updated information; **(Huang: see the trace data report thread updating the status data collection thread with data from the trace data store and the event driven data as illustrated in figure 5 and as described in paragraph 0076)**
- a thread configured to set a target state of actuators; **(Huang: see the machine control thread as illustrated in figure 5; "In one embodiment, the execution thread for**

collecting the trace data may have a higher priority even than the control thread that controls the actuators (which is also shown in FIG. 5)." Paragraph 0076)

- a thread configured to obtain updated sensor readings; **(Huang: see the status data collection thread as illustrated in figure 5; "For the status data path 506, an independently executing thread obtains all sensor and/or actuator data from the various I/O module controllers to be passed along to user interface module 508 for display." Paragraph 0075)**
- a thread configured to process user interactions; and
- a thread that eliminates other threads upon detecting a problem with the eliminated threads.

Dwinnell, Schultz, Huhn, and Haung are combinable for the same rationale as set forth above with respect to claim 13.

18. Claim 16 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent Publication No. 2011/0051645 (Hong).

Claim 16:

Dwinnell, Schultz, and Huhn do not explicitly describe checking validity as described below. However, Hong teaches the checking validity as described below.

Dwinnell, Schultz, Huhn, and Hong describe the system of claim 12, wherein controller is communicatively coupled to the actuator or sensor via a frame-based carrier-sense multiple access protocol with collision detection. **(see the controller in Dwinnell and the CSMA communication in Hong; Hong: "The node sensed collision and the nodes transmitted signals to the node sensed collision transmit data packets using a Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA) technique, which uses RTS/CTS for avoiding collision. Therefore, the nodes transmitted the signals check if the signals they transmitted collide in the upper node through a signal overhearing period. When a collision signal is detected, the nodes perform a channel allocation operation using the RTS/CTS packet in the data transmission period." Paragraph 0083; Dwinnell: "The remote site system 101 comprises a remote site video and data capture server 202 (hereinafter referred to as a remote site capture server 202 or "RSCS 202") in electronic communication with a plurality of cameras 205 positioned strategically about the remote site." Paragraph 0039)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Hong ,namely, using various communication techniques in a sensor

network, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of using various communication techniques in a sensor network to Hong would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing and various communication techniques of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of using CSMA by sensors in Hong).

19. Claim 22 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent No. 4,052,703 (Collins).

Claim 22:

Dwinnell, Schultz, and Huhn do not explicitly describe checking validity as described below. However, Collins teaches the checking validity as described below.

Dwinnell, Schultz, Huhn, and Collins describe the system of claim 12, comprising: means for checking validity of a command. (**Collins: "A further object of the invention is to provide a control system capable of determining the validity of a message received over a cable without having to re-transmit the message to the remote control station." Col. 3, lines 65-68; "In this case, the answer being "no", another diamond 106 asks the question whether or not the instruction is a valid command for operation in the automatic mode. If the answer is "yes", the instruction signal is sent to block 107. The tests required in the various diamond or test functions employed in the logic control system of the present invention may be performed using a data masking technique or a "rotate right" technique or any other logical operation for determining the content or validity of a logical signal." Col. 11, lines 21-30**)

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Collins, namely, validating commands for an oil well system, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Collins to validate commands for devices within an oil well would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and

control system (i.e., remote monitoring and control of oil wells using actuator addressing and validation of control of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of validating control instructions for underwater oil installations in Collins).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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 on Monday through Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Lo can be reached on 571-272-9774. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher E. Everett/
Primary Examiner, Art Unit 2121

Notice of References Cited	Application/Control No. 14/984,422	Applicant(s)/Patent Under Reexamination PHILLIPS, AARON	
	Examiner Christopher E. Everett	Art Unit 2121	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-6,665,568 B1	12-2003	Hott; Brandt P.	G05B19/4083	700/83
	B	US-				
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

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

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	**Art Unit**
	CHRISTOPHER E EVERETT	2121

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

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

CLAIM		DATE								
Final	Original	12/09/2016	03/23/2017							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
	11	✓	✓							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							
	16	✓	✓							
	17	✓	✓							
	18	✓	✓							
	19	✓	✓							
	20	✓	✓							
	21	✓	✓							
	22	✓	✓							
	23	✓	✓							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	Art Unit
	CHRISTOPHER E EVERETT	2121

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Search of PALM using inventor search	12/9/2016	CEE
Search of Google patent using text searches	12/9/2016	CEE
Search of EAST using inventor, assignee, and text searches	12/9/2016	CEE
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	12/9/2016	CEE
Search of 700/1,282,275,281,42 using text searches	12/9/2016	CEE
Search of 702/6,13,183,188 using text searches	12/9/2016	CEE
Search of 709/224 using text searches	12/9/2016	CEE
Search of 166/336,363,250.1 using text searches	12/9/2016	CEE
Search of 340/853.3,853.2,856.3 using text searches	12/9/2016	CEE
Update of EAST and sub-class searches described above	3/23/2017	CEE
Search of Google patent using text searches	3/23/2017	CEE
Search of Google scholar using text searches	3/23/2017	CEE

INTERFERENCE SEARCH

	/CHRISTOPHER E EVERETT/ Primary Examiner.Art Unit 2121

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

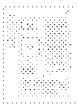
	/CHRISTOPHER E EVERETT/ Primary Examiner.Art Unit 2121

Google [redacted] Sign in

All Shopping Videos News More Settings Tools

About 16,300 results (0.20 seconds)

Intelligent electronic device having user-authenticating capabilities



www.google.com/patents/US8665061

Grant - Filed Aug 8, 2009 - Issued Mar 4, 2014 - Andrew Kagan - Electro Industries/Gauge Tech

An intelligent electronic device (IED) includes a **user authentication** ... at least one **actuator** of the **user** interface module during the pre-determined time .... electronically-**controlled Remote** Terminal Units, protective relays, fault ...

Overview · Related · Discuss

Intelligent electronic device having user-authenticating capabilities



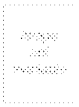
www.google.com/patents/US20140181924

App. - Filed Mar 1, 2014 - Published Jun 26, 2014 - Andrew Kagan - Electro Industries/Gauge Tech

In exemplary embodiments, the **user authentication** module includes a ... electronically-**controlled Remote** Terminal Units, protective relays, fault ... ... For example, by using the **actuators** 136 of the **user** interface unit 130, the ...

Overview · Related · Discuss

A remote control system for a locomotive having user authentication ...



www.google.com/patents/WO2005028274A1?cl=en

App. - Filed Sep 22, 2004 - Published Mar 31, 2005 - Folkert Horst - Beltpack Corporation

A **remote control** system as defined in claim 1, wherein said **user** .... a **user authentication** unit in communication with said **remote control** device, said **user** ..... globally to the collection of various **actuators** located on the train for ...

Overview · Related · Discuss

Method of testing and installing a home automation remote control unit



www.google.com/patents/US7860679

Grant - Filed Apr 18, 2007 - Issued Dec 28, 2010 - Valérie Rouhier - Somfy Sas

A method of testing and installing a **remote control** unit (RCU) for controlling ... of the elements (**actuators**, sensors, **remote control** units) of the installation is .... In particular, the **user** will have created all the **authentication** links ...

Overview · Related · Discuss

Secure remote control for operating closures such as garage doors



www.google.com/patents/CN105378805A?cl=en · Translate this page

App. - Filed Sep 5, 2014 - Published Mar 2, 2016 - B·坎德洛尔 · 索尼公司

Secure **remote control** for operating closures such as garage doors ... a **user** operation by **remote control** (RC) on the **actuator** selector element ... radio transceiver and the **user** transceiver device **authentication** code. 6.

Overview · Related · Discuss

Geo-Location Estimate (GLE) Sensitive Physical Access Control ...



www.google.com/patents/US20160358391

App. - Filed Sep 1, 2015 - Published Dec 8, 2016 - Dean Drako - Dean Drako

A server is coupled to a network controlling door **actuators** at physical geo-locations. ... A circuit of the mobile device receives **radio** signal magnitude, phase, and ... Access **Control** App which contains an **authenticated user** id, ...

Overview · Related · Discuss

Intelligent electronic device having image capture capabilities



www.google.com/patents/US20150070507

App. - Filed Nov 12, 2014 - Published Mar 12, 2015 - Erran Kagan - Electro Industries/Gauge Tech

10 depicts an exemplary system for **authenticating** a **user remotely** over a .... (for example, LED indicators), and **actuators**, or **user controls**, 136.

Overview · Related · Discuss

Method and system for synchronization and remote control of ...



www.google.com/patents/US20150187209

App. - Filed Mar 11, 2015 - Published Jul 2, 2015 - Anders T. Brandt - Sigma Designs, Inc.

Actuators may be devices where **remote control** of the device or devices is ... For example, an **authenticated user** of a mobile device on a mesh ...

Overview · Related · Discuss

Spatial audio apparatus



www.google.com/patents/WO2014096908A1?cl=en

App. - Filed Dec 21, 2012 - Published Jun 26, 2014 - Roope Olavi JÄRVINEN · Nokia Corporation

an analyser configured to **authenticate** at least one **user** from the input; .. in claims 1 to 12, comprising a **user** input configured to **control** the **actuator**, 14. ... Connections such as Bluetooth **radio** amongst others can be used to ...

Overview · Related · Discuss

Vehicle controller for straddle type vehicle



www.google.com/patents/US7528501

Grant - Filed May 19, 2006 - Issued May 5, 2009 - Hitoshi Unno - Yamaha Hatsudoki Kabushiki Kaisha

If the **authentication** is successful, power is supplied from a control unit to a steering lock ... to claim 1 , wherein the unlocking mechanism comprises an **actuator**. ... said steering lock mechanism comprises a manual **user** operation. ... device) to transmit a signal to the vehicle to **remotely control** starting of the ...

Overview · Related · Discuss

Gooooooooogle >

1 2 3 4 5 6 7 8 9 10 Next

Help Send feedback Privacy Terms

Wireless sensor networks: a survey on recent developments and potential synergies
P Rawat, KD Singh, H Chaouchi, JM Bonnin - The Journal of ..., 2014 - Springer
... It includes sensors and sensor networks that enable **remote** monitoring by using sensors at multiple ... The design and deployment of testbeds should consider **user** requirements to allow easy and ... WSN testbed in Table 5, especially from the perspective of the **users** in terms of the ...
Cited by 200 Related articles All 12 versions Cite Save

Research Challenges for the Security of **Control** Systems.
AA Cárdenas, S Amin, S Sastry - HotSec, 2008 - usenix.org
... In 2008 a teenager in Poland used a modified TV **remote control** to **control** ... Servers change rarely, there is a fixed topology, a stable **user** population, regular ... In general, information security has developed mature technologies and design principles (**authentication**, access **control** ...
Cited by 303 Related articles All 9 versions Cite Save More

Industrial routing requirements in low-power and lossy networks
K Pister, P Thubert, S Dwars, T Phinney - 2009 - rfc-editor.org
... be as easy as dragging and dropping an icon from a pool of **authenticated** new joiners ... A shared key is used to **authenticate** messages at the MAC layer ... Although such symmetric key encryption and **authentication** mechanisms at MAC and transport layers may protect reasonably ...
Cited by 168 Related articles All 135 versions Cite Save

Why WirelessHART
D Chen, M Nixon, A Mok - WirelessHART™, 2010 - Springer
... It provides both **authentication** and encryption. ... By maintaining the same HART **user** experience, we save a lot of upfront cost in training. ... It is estimated that only about 25 percent of the total wired HART **devices** in- stalled are digitally connected so that **users** can fully leverage the ...
Cited by 185 Related articles All 7 versions Cite Save More

A vision of IoT: Applications, challenges, and opportunities with china perspective
S Chen, H Xu, D Liu, B Hu ... - IEEE Internet of Things ..., 2014 - ieeexplore.ieee.org
... such as access and transport resource **control** functions, mobility management, or **authentication**, authorization, and ... Various applications can be published to the application plat- form and **users** can get ... IoT provides many new opportunities to the industry and end **user** in many ...
Cited by 87 Related articles All 10 versions Cite Save

Authentication and authorization mechanisms for substation automation in smart grid network
B Vaidya, D Makrakis, HT Mouftah - IEEE Network, 2013 - ieeexplore.ieee.org
... An enterprise-level **remote** access server **authenticates** a **user** before establishing a communica ... updated reasonably promptly to ensure that only intended **users** can **authenticate** to intended ... **Users** have to be uniquely identified and **authenticated** for local and **remote** accesses. ...
Cited by 17 Related articles All 4 versions Cite Save

Towards a taxonomy of attacks against energy **control** systems
T Fleury, H Khurana, V Welch - International Conference on Critical ..., 2008 - Springer
... properly patched [8, 21, 26]; weak or non-existent **authentication** (includ- ing unchanged passwords) [5, 28]; and ... Examples are insecure communication protocols used by processes and **users** [5, 8, 26, 29] and flawed ... Password [5] **Authenticate** Configuration Any **User** High ...
Cited by 41 Related articles All 21 versions Cite Save

Guide to industrial **control** systems (ICS) security
K Stouffer, J Falco, K Scarfone - NIST special publication, 2011 - gocs.com.de
... privilege). ■ Considering the use of separate **authentication** mechanisms and credentials for **users** of the ICS network and the corporate network (ie, ICS network accounts do not use corporate network **user** accounts). ■ Using ...
Cited by 679 Related articles All 61 versions Cite Save More

Security issues in SCADA networks
VM Igure, SA Laughter, RD Williams - Computers & Security, 2006 - Elsevier
... Again, all the typical problems of **authenticating** human **users** still exist even in SCADA networks just as in any other environment. 4.2. ... The main security properties of any system are confidentiality, integrity, availability, **authentication** and non-repudiation. ...
Cited by 412 Related articles All 9 versions Cite Save

Trends in process **control** systems security

A Miller - IEEE Security & Privacy, 2005 - ieeexplore.ieee.org

... Programmable logic controllers (PLCs) and **remote** terminal units (RTUs) monitor and **control** offshore elements. Communication server MW modem MW modem **...** Gateway Gateway **User** home PC **...** Modem bank and server Firewall Two-factor **authentication** Firewall Router **...**

Cited by 49 Related articles All 7 versions Cite Save

Google [redacted]

All Images News Shopping More Settings Tools

About 7,840 results (0.58 seconds)

Using pocket device to survey, monitor, and control production data ...
www.google.com/patents/US20100127888
App. - Filed Nov 26, 2008 - Published May 27, 2010 - Min He - Schlumberger Canada Limited
A system for real-time data surveillance in an **oilfield** operation includes a data ... Using pocket **device** to survey, monitor, and **control** production data in real time .... The communication unit 224 may send the data to a **remote** office for .... Once the **users** or experts are **authenticated**, Survey Alarm Summary ...
Overview · Related · Discuss

Systems and methods for providing end-to-end monitoring and/or ...
www.google.com/patents/WO2014150706A1?cl=en
App. - Filed Mar 12, 2014 - Published Sep 25, 2014 - Matthew HARRISON · Wellaware Holdings, Inc.
transmitting the **control** signal to the **field** site over the regional network, ... Further, **remote** monitoring computing **devices**, intelligent sensing **devices**, ... Example natural resource assets can include **oil** well sites, gas well sites. ... In some examples, data can be provided to various types of **users**, or entities.
Overview · Related · Discuss

Systems and methods for providing end-to-end monitoring and/or ...
www.google.com/patents/US20160010445
App. - Filed Mar 12, 2014 - Published Jan 14, 2016 - Matthew Harrison · Wellaware Holdings, Inc.
transmitting the **control** signal to the **field** site over the regional .... Further, **remote** monitoring computing **devices**, intelligent sensing .... Example natural resource assets can include **oil** well sites, gas well ..... In some examples, mutual entity authentication is provided such that only **authenticated users** and/or ...
Overview · Related · Discuss

Internet wide distributed data control system
www.google.com/patents/WO2000049471A1?cl=en
App. - Filed Feb 16, 2000 - Published Aug 24, 2000 - Brandt Powell Hott · Brandt Powell Hott
Both the monitoring and **control** functions are available through the Internet (21), ... its wells; and controlling production variables of said **oilfield** and its wells. ... execution of said **authentication** execution object; validating said **user** name to at ... The system of claim 13, wherein said Internet browser **device** is ...
Overview · Related · Discuss

Combined hardware and software architecture for remote monitoring
www.google.com/patents/US20030198188
App. - Filed Apr 20, 2002 - Published Oct 23, 2003 - Michael Castlebury · Castlebury Michael J.
The central server then provides the stored data to **users** via served ... A system for the monitoring of **remote** equipment or processes such as **oil** and gas wells. ... to the **field** of distributed communications systems and specifically to .... The local **controller** is also connected to a data transport **device**, 104, ...
Overview · Related · Discuss

Authenticating wireless phone system
www.google.com/patents/WO2006020880A1?cl=en

App. - Filed Aug 11, 2005 - Published Feb 23, 2006 - Thomas R. Markham - Honeywell International Inc.
In an **authenticating** portable electronic **device** having **radio** frequency ... the keypad of said **device** for **authenticating** the **user** of said **device**; ... optical patent length differences, DNA, voice recognition and skin **oil**. ... **FIELD** OF THE TNVRNTfQN ... The gate 17 acts as a wireless badge reader/gate **controller**.
Overview · Related · Discuss

Biometric access control transactions
www.google.com/patents/WO2009076525A1?cl=en
App. - Filed Dec 11, 2008 - Published Jun 18, 2009 - James Douglas Evans - Visa U.S.A. Inc.
In one aspect, an access **control** processor **device**, comprising a biometric input ... the communication element is a contactless **radio** frequency (R. F.) unit. 4. ... in an access **control** processing **device**, **authenticating** the **user** biometric ... ... a finger excitation electrode adjacent the array of electric **field** sensing ...
Overview · Related · Discuss

Boat propulsion apparatus and boat
www.google.com/patents/US8801481
Grant - Filed Feb 21, 2008 - Issued Aug 12, 2014 - Masaru Kawanishi · Yamaha Hatsudoki Kabushiki Kaisha
In a boat propulsion apparatus including an engine control **device** for controlling ... by the **remote control device** if the second ID is **authenticated** by the **authentication**; ... **Field** of the Invention ..... The **user** ID as the second ID is stored in a storage 12 ... . The **oil** pressure decrease judgment control section 22 ...
Overview · Related · Discuss

System for remote control using a wap-enabled device
www.google.com/patents/WO2009143479A1?cl=en
App. - Filed May 22, 2009 - Published Nov 26, 2009 - Claudio R. Ballard - Ballard Claudio R
The control module has a processor coupled to the wireline and wireless ... control using a Wireless Application Protocol (WAP) enabled **device**. ... **authenticating** at least one security credential received from the .... TECHNICAL **FIELD** .... and **remotely controlled** vehicles and stationary structures (e.g., **oil** ...
Overview · Related · Discuss

Reservoir management linking
www.google.com/patents/US8706541
Grant - Filed Sep 9, 2009 - Issued Apr 22, 2014 - Horacio Ricardo Bouzas · Schlumberger Technology Corporation
transmitting, by the modeling tool, the reservoir volume to an **oilfield** tracking tool; ... The system of claim 8 , wherein the modeling tool executes on a **remote device**. .... the transceiver or may itself execute commands to the **controller**. .... The security module 514 may be configured to **authenticate users** using ...
Overview · Related · Discuss

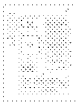
Gooooooooooogle >
1 2 3 4 5 6 7 8 9 10 Next

Google [redacted] Sign in

All News Images Shopping More Settings Tools

About 44,500 results (0.18 seconds)

Intelligent electronic device having user-authenticating capabilities



www.google.com/patents/US8665061

Grant - Filed Aug 8, 2009 - Issued Mar 4, 2014 - Andrew Kagan - Electro Industries/Gauge Tech

wherein the user authentication module grants the **authorized user** access to the ... time interval and disable operation of the at least one **actuator** of the user interface ... a **controller** configured for comparing a first piece of user ...

Overview · Related · Discuss

Medication cabinetry



www.google.com/patents/CA2896353A1?cl=en

App. - Filed Dec 23, 2009 - Published Jul 15, 2010 - Scott I. Biba - Automed Technologies, Inc.

The cabinet further includes an **actuator** coupled to the cover and a ... For example, an **authorized user** may direct the electronic **control** system ...

Overview · Related · Discuss

Medication cabinetry



www.google.com/patents/EP2381814A2?cl=en

App. - Filed Dec 23, 2009 - Published Nov 2, 2011 - Scott I. Biba - AutoMed Technologies, Inc.

The cabinet further includes an **actuator** coupled to the cover and a ... For example, an **authorized user** may direct the electronic **control** system ...

Overview · Related · Discuss

System and method for virtual region based access control operations ...



www.google.com/patents/CA2858779A1?cl=en

App. - Filed Aug 7, 2014 - Published Feb 16, 2015 - Vinoth Dharmalingham - Honeywell International Inc.

the user input of the security system receiving a change in a parameter from ... an identifier that defines at least one **authorized user** of the security system. ... BASED ACCESS **CONTROL** OPERATIONS USING BIM ... [0017] The secured area may also include one or more **actuator** devices (**actuators**) 22, 24.

Overview · Related · Discuss

Method and system of interacting with building security systems



www.google.com/patents/CA2880694A1?cl=en

App. - Filed Jan 27, 2015 - Published Aug 6, 2015 - Viswanathan Chatapuram Krishnan - Honeywell International Inc.

... of sensors and **actuators** within a building and a respective **control** feature embodied ... The system as in claim 1 wherein the **control** feature further ... The user interface may be provided to allow **authorized users** to arm the ...

Overview · Related · Discuss

Retrofit safety means for weapons and method for securing weapons



www.google.com/patents/US8046948

Grant - Filed Oct 16, 2007 - Issued Nov 1, 2011 - Ernst Mauch - Armatix Gmbh

The safety mechanism comprises an **actuator** for releasing said ... an electronic **control** unit for the authentication of an **authorized user** and the ...

Overview · Related · Discuss

Safety device for firearm and remote control system of one or more ...



www.google.com/patents/EP1996895B1?cl=en
Grant · Filed Feb 26, 2007 · Issued Oct 10, 2012 · Massimiliano Anzeloni · Famiglia Anzeloni s.r.l.
a **control** unit (2), operatively connected with said **actuator** means (10; ... transponder (5) is provided in a ring put on by said **authorized user** (U).
Overview · Related · Discuss

Safety device for firearms and method for securing firearms provided ...



www.google.com/patents/US8549780
Grant · Filed Mar 11, 2009 · Issued Oct 8, 2013 · Dietmar Emde · Armatix Gmbh
a transponder for authenticating at least one **authorized** firearm **user** carrying the ... An electronic **control** unit preferably **controls** the **actuator**.
Overview · Related · Discuss

System and method for virtual region based access control operations ...



www.google.com/patents/US20160239199
App. · Filed Apr 27, 2016 · Published Aug 18, 2016 · Vinoth DHARMALINGAM · Honeywell International Inc.
the user interface device receiving first user input dividing the .... The secured area may also include one or more **actuator** devices (**actuators**) 22, 24. ... PIN numbers of **authorized users** used by the card reader **controller**, etc.
Overview · Related · Discuss

Medication Cabinetry



www.google.com/patents/US20150305509
App. · Filed Jul 6, 2015 · Published Oct 29, 2015 · Scott I. Biba · Automed Technologies, Inc.
The cabinet further includes an **actuator** coupled to the cover and a ... For example, an **authorized user** may direct the electronic **control** system ...
Overview · Related · Discuss

Gooooooooooogle ›
1 2 3 4 5 6 7 8 9 10 Next

The gator tech smart house: A programmable pervasive space

S Helal, W Mann, H El-Zabadani, J King… - Computer, 2005 - ieeexplore.ieee.org

... **radio**-frequency identification (RFID) tag for key- less entry by residents and **authorized** personnel ... **Users** wore vests in which transceiver tags attached to the shoulders would lis- ten ... While this technology provides precise **user** posi- tion and orientation measurements, it was inap ...

Cited by 917 Related articles All 21 versions Cite Save

Internet of things: ubiquitous home **control** and monitoring system using android based smart phone

R Piyare - International Journal of Internet of Things, 2013 - article.sapub.org

... Gateway and **Remote** Environment (see Figure 2). **Remote** Environment represents **authorized users** who can ... This Ethernet shield **has** the capability to be used both, as a client ... To successfully communicate between **remote user** and the Home Gateway, configuration stage and ...

Cited by 61 Related articles All 6 versions Cite Save More

WSN-based smart sensors and **actuator** for power management in intelligent buildings

NK Suryadevara, SC Mukhopadhyay… - IEEE/ASME …, 2015 - ieeexplore.ieee.org

... Fig. 12. Secured webpage for controlling appliances **remotely** after successful **authorized** login. ... The sensor networks are programmed with various **user** in- terfaces suitable for **users** of varying ability and for expert **users** such that the system can be maintained easily ...

Cited by 87 Related articles All 15 versions Cite Save

A synchronous **remote** accessing **control** laboratory on the Internet

M Saad, H Saliah-Hassane… - International …, 2001 - pdfs.semanticscholar.org

... the process, both the **user** interface and animated objects can be viewed by **authorized users** on the Web ... **User** interfaces shown in figure 4 and 6 allow **users** to perform open loop manipulation to ... However, the time delay decreased interaction between the process and the **user**. ...

Cited by 33 Related articles All 7 versions Cite Save More

A web-based distributed virtual educational laboratory

L Benetazzo, M Bertocco, F Ferraris… - IEEE Transactions …, 2000 - ieeexplore.ieee.org

... as instrument-equipped systems and plants must be allowed only to **authorized users**, according to ... be stored on the client separately, run-time verification of the **user authorization** performed by ... in the instru- ment-equipped server verifies the client's **authorization**, acquires the ...

Cited by 215 Related articles All 9 versions Cite Save

Design and implementation of a WIFI based home automation system

A ElShafee, KA Hamed - World academy of science, engineering and …, 2012 - waset.org

... 2) Security and authentication: Only **authorized user** can login to the system (locally, or **remotely**) in ... is responsible for executing the automations that **have** been already saved by the **users**. ... **remotely** using the WiFi technology to connects system parts, satisfying **user** needs and ...

Cited by 56 Related articles All 8 versions Cite Save More

IT security for industrial **control** systems

J Falco, K Stouffer, A Wavering… - Nat. Inst. Standards …, 2002 - ws680.nist.gov

... 16. Malicious code exploitation (Malicious_Code) An **authorized user**, IT system, or hacker downloads and executes malicious code, which causes abnormal processes that violate the integrity, availability, or confidentiality of system ... **User** abuses **authorization** to collect ...

Cited by 33 Related articles All 6 versions Cite Save More

Security and privacy issues in wireless sensor networks for healthcare applications

M Al Ameen, J Liu, K Kwak - Journal of medical systems, 2012 - Springer

... Another preventive measure can be that only **authorized** people should be allowed to physically handle the ... wireless networks and Internet are required to be encrypted to protect the **user's** privacy. ... It is also necessary that, specific **users** should not be identified unless there is a ...

Cited by 270 Related articles All 20 versions Cite Save

Guide to industrial **control** systems (ICS) security

K Stouffer, J Falco, K Scarfone - NIST special publication, 2011 - gocs.com.de

... and binding on federal agencies by the Secretary of Commerce under statutory **authority**. ... ICS networks, and having separate authentication mechanisms and credentials for **users** of the ... field conditions; disabling all unused ports and services; restricting ICS **user** privileges to ...

Cited by 679 Related articles All 61 versions Cite Save More

Remote-controlled home automation systems with different network technologies

AR Delgado, R Picking, V Grout - 2006 - collections.crest.ac.uk

... It **has** been accepted for inclusion in Computing by an **authorized** administrator of Glyndŵr University Research **...** to implement due to the high impact that they might **have** on the everyday **user**. **...** In the study section, it is very important to know which benefits the **users** are going to **...**

Cited by 54 Related articles All 10 versions Cite Save More

Google [redacted]

All Shopping Images Videos More Settings Tools

About 25,700 results (0.56 seconds)

Loading dock authorization-remote control



www.google.com/patents/US20140075842

App. · Filed Aug 14, 2013 · Published Mar 20, 2014 · Matthew C. McNeill · Rite-Hite Holding Corporation

A workflow **authorization** system for **use** in a distribution center ... if the **user** identification input indicates the operator does not **have** a correct level of training. ... An **actuator** is included in the loading dock **remote control** system ...

Overview · Related · Discuss

Safety device for firearm and remote control system of one or more ...



www.google.com/patents/US8205372

Grant · Filed Feb 26, 2007 · Issued Jun 26, 2012 · Massimiliano Anzeloni · Famiglia Anzeloni Srl

A safety device (1) for fire-arms (11), includes **actuator** elements (10; 10', 19, 20 ... of an **authorised user** (U) for codified **remote control** of said **actuator** . ... Furthermore, said lever 18 **has** at the bottom an offset 23 in which can ...

Overview · Related · Discuss

Safety device for firearm and remote control system of one or more ...



www.google.com/patents/EP1996895B1?cl=en

Grant · Filed Feb 26, 2007 · Issued Oct 10, 2012 · Massimiliano Anzeloni · Famiglia Anzeloni s.r.l.

a **control** unit (2), operatively connected with said **actuator** means (10; ... transponder (5) is provided in a ring put on by said **authorized user** (U).

Overview · Related · Discuss

Secure remote control for operating closures such as garage doors



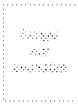
www.google.com/patents/CN105378805A?cl=en · Translate this page

App. · Filed Sep 5, 2014 · Published Mar 2, 2016 · B·坎德洛尔·索尼公司

Secure **remote control** for operating closures such as garage doors ... received by the RC and/or if a designated **authorization** device such as a mobile ... a **user** operation by **remote control** (RC) on the **actuator** selector element .... Obtains car parked on the street right to **use has** also been made for the right ...

Overview · Related · Discuss

Medication cabinetry



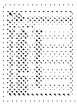
www.google.com/patents/CA2896353A1?cl=en

App. · Filed Dec 23, 2009 · Published Jul 15, 2010 · Scott I. Biba · Automed Technologies, Inc.

The cabinet further includes an **actuator** coupled to the cover and a controller ... For example, an **authorized user** may direct the electronic control system 14 ... movable access portion 42 in the open position, the user **has** access to the ... physically joined to the cabinetry, wireless **remote controls** (similar to ...

Overview · Related · Discuss

Remote monitoring system for tanks



www.google.com/patents/US8836790

Grant · Filed Jun 17, 2013 · Issued Sep 16, 2014 · Ronald Neal McMillan · Remote Monitoring Systems, LLC

(a) establishing a communication path between a valve **control** system at a valve ... (ii) a camera to photograph the **authorized user**; and ... a photograph of the **authorized user** into a historical

database of all **actuator** activity ..... One embodiment of the **control** panel 22 **has** input devices such as a keypad 32 ...
Overview · Related · Discuss

Safety device for fire-arm and remote control system of one or more ...

www.google.com/patents/WO2007102181A2?cl=en
App. · Filed Feb 26, 2007 · Published Sep 13, 2007 · Massimiliano Anzeloni · Famiglia Anzeloni S.R.L.
The invention further relates to a **remote control** system for one or ... with the same for codified **remote control** of said **actuator** means (10; 10', 19, 20, 21 , 21 ', 22). ... transponder (5) is provided in a ring put on by said **authorised user** (U). ..... Furthermore, said lever 18 **has** at the bottom an offset 23 in which ...
Overview · Related · Discuss

Medication cabinetry

www.google.com/patents/EP2381814A2?cl=en
App. · Filed Dec 23, 2009 · Published Nov 2, 2011 · Scott I. Biba · AutoMed Technologies, Inc.
The cabinet further includes an **actuator** coupled to the cover and a ... fully within the drawer housing unless the a user **has** the controller direct the latch to release. 21. .... For example, an **authorized user** may direct the electronic control ... physically joined to the cabinetry, wireless **remote controls** (similar to ...
Overview · Related · Discuss

Security structure unlocking system for use by emergency response ...

www.google.com/patents/US5965947
Grant · Filed Dec 12, 1996 · Issued Sep 21, 1999 · Pete Sutsos · Sutsos; Pete
an **authorized user** input device coupled to the unlocking mechanism and ... said scanner **has** a reduced sensitivity antenna formed to detect signals ... an **actuator** coupled to a lock assembly and formed to unlock said structure; ... provide a **remote controlled** system enabling emergency response personnel ...
Overview · Related · Discuss

A remote control system for a locomotive having user authentication ...

www.google.com/patents/WO2005028274A1?cl=en
App. · Filed Sep 22, 2004 · Published Mar 31, 2005 · Folkert Horst · Beltpack Corporation
The **remote control** device is operative for receiving a command signal indicative ... When the user identification data belongs to an **authorized user**, the locomotive ... Typically, **remote control** systems for locomotives **have** two main .... refers globally to the collection of various **actuators** located on the train for ...
Overview · Related · Discuss

Gooooooooooogle >
1 2 3 4 5 6 7 8 9 10 Next

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	("6665568").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2017/03/23 14:01
L2	10	("5973696" | "5982362" | "6138150" | "6170007" | "6201996" | "6311101").PN. OR ("6665568").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/03/23 14:15
L3	6148	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L4	7044	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L5	26644	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L6	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L7	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L8	41251	L3 L4 L5 L6 L7	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L9	227637	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L10	3060500	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L11	62	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2017/03/23 14:18
L12	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2017/03/23 14:18
L13	9	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2017/03/23 14:18

L14	8	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2017/03/23 14:18
L15	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L16	0	L15 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L17	7	L15 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L18	6555	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L19	3329	L18 and pump	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L20	1245	L19 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L21	342	L20 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L22	6	L21 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L23	2046	L8 and L9	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L24	2883167	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L25	24993	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L26	976	L10 and L23	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L27	511	L26 and L24	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L28	514	L9 and L25	US-	OR	ON	2017/03/23

			PGPUB; USPAT; EPO			14:18
L29	15	L27 and L28	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L30	22	L9 and L25 and L8	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L31	812457	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L32	14890	L31 and L9	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L33	190	L32 and L25	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L34	269	L11 L12 L13 L14 L16 L17 L22 L29 L30 L33	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L35	3859	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L36	22	L35 and L25 and L24	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L37	46	(US-20040262008-$ or US-20020161685-$ or US-20090055029-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$).did. or (US-7289994-$ or US-6801135-$ or US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L38	4	L37 and (network adj2 (address addresses))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L39	47	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-	US-PGPUB;	OR	ON	2017/03/23 14:18

		20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$).did. or (WO-2008124765-$).did.	USPAT; EPO			
L40	29	L39 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L41	12	L40 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L42	51	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L43	20	L42 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L44	48	(US-20120029661-$ or US-20080077512-$ or US-20100179669-$ or US-20040125141-$ or US-20040075689-$ or US-20040064205-$ or US-20120041570-$ or US-20050027377-$ or US-20050027376-$ or US-20110173556-$ or US-20080208380-$ or US-20070179641-$ or US-20050120288-$ or US-20040186927-$ or US-20030233438-$ or US-20030225650-$ or US-20030107591-$ or US-20090327942-$ or US-20080189638-$ or US-	US-PGPUB; USPAT	OR	ON	2017/03/23 14:18

		20080065706-$ or US-20080065705-$ or US-20080034047-$ or US-20070239291-$).did. or (US-6931288-$ or US-7515977-$ or US-8677262-$ or US-8533619-$ or US-8356257-$ or US-7680546-$ or US-7526794-$ or US-6889096-$ or US-8516383-$ or US-7971151-$ or US-7783370-$ or US-7729792-$ or US-7526347-$ or US-7152072-$ or US-7117052-$ or US-7043311-$ or US-6834370-$ or US-6735596-$ or US-6442512-$ or US-6434500-$ or US-5631825-$ or US-6445963-$ or US-6522934-$ or US-6247020-$).did.				
L45	24	L44 and (address addresses)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L46	17	L44 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L47	13	L45 and L46	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L48	6148	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L49	7044	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L50	26644	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L51	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L52	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L53	41251	L48 L49 L50 L51 L52	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L54	86021	(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).cpc.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L55	125354	L54 L53	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L56	394	((web html) near4 (control controlling) near4 (actuator controller valve)).ab.	US-PGPUB;	OR	ON	2017/03/23 14:18

			USPAT; FPRS; EPO			
L57	20	L55 and L56	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L58	19	L56 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L59	34	L57 L58	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L60	54	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$ or US-20080077512-$ or US-20030052180-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$ or US-5805926-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2017/03/23 14:18
L61	2	L60 and (leak adj4 sensor)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L62	8	L60 and (private)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L63	6	L60 and (carrier)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L64	2	L60 and (validity)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L65	129	("5247447" | "5272642" | "5353229").PN. OR	US-	OR	ON	2017/03/23

		("5546301").URPN.	PGPUB; USPAT; USOCR			14:18
L66	21	L65 and thread	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L67	0	(thread near4 (actuator and sensor and synchronize and data))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L68	146	(thread near4 (actuator and sensor))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L69	10	L68 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
L70	405	L34 L67 L69 L66 L61 L62 L63 L64 L59 L58 L57 L47 L46 L45 L43 L38 L40 L41 L36	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 14:18
S1	11	("20020161685" | "20020169645" | "20030004624" | "20030182463" | "20040088115" | "20040231851" | "20050108504" | "20060240818" | "20080208475" | "20100295673" | "20120316658").PN.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/22 08:35
S2	34	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/22 08:35
S3	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:35
S4	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:36
S5	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:39
S6	1	("20060149476").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:39
S7	1	("20060271299").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S8	1	("20030065447").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S9	1	("4594665").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S10	1	("20050092523").PN.	US-PGPUB;	OR	OFF	2013/02/22 08:42

			USPAT; EPO			
S11	1	("20060047527").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:42
S12	53	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11	US-PGPUB; USPAT; EPO	OR	ON	2013/02/22 08:54
S13	17	(US-20090260829-$ or US-20020112860-$ or US-20040262008-$ or US-20070107903-$ or US-20040251030-$).did. or (US-7000693-$ or US-6420976-$ or US-7967066-$ or US-RE41173-$ or US-7148812-$ or US-6768700-$ or US-7845404-$ or US-6913083-$ or US-4636934-$ or US-5732776-$ or US-4052703-$ or US-7958938-$ or US-4755943-$).did.	EPO; JPO; DERWENT	OR	ON	2013/02/22 09:01
S14	1	("7261162").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:05
S15	62	("5331318" | "5597042" | "5662165" | "5706892" | "5706896" | "5721538" | "5730219" | "5732776" | "5803167" | "5868201" | "5934371" | "5941307" | "5959547" | "5975204" | "5992250" | "6006832" | "6012015" | "6046685" | "6068053" | "6075462" | "6125938" | "6160492" | "6161618" | "6176312" | "6179057" | "6192980" | "6192988" | "6209640" | "6247536" | "6257332" | "6271766" | "6276454" | "6279660" | "6281489" | "6288975" | "6296066" | "6422315" | "6469636" | "6498988" | "6622799" | "6670880" | "6717501" | "6788980" | "6801135" | "6816082" | "6851444").PN. OR ("7261162").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/22 09:05
S16	1	("20040262008").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:05
S17	1	("7148812").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S18	1	("7958938").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S19	1	("7967066").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S20	1	("7845404").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S21	1	("6913083").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:09
S22	1	("20020112860").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:09

S23	1	("5732776").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:10
S24	1	("4052703").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:11
S25	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:50
S26	0	S25 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:50
S27	7	S25 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:51
S28	4518	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:52
S29	2295	S28 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:53
S30	839	S29 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:53
S31	239	S30 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:54
S32	2	S31 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:54
S33	4284	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S34	5841	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S35	18470	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S36	767	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07

S37	463	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08
S38	29579	S33 S34 S35 S36 S37	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08
S39	168445	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08
S40	2119066	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:10
S41	1404	S38 and S39	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:10
S42	1837654	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:11
S43	579	S41 and (internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:11
S44	15604	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S45	642	S40 and S41	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S46	315	S45 and S42	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S47	337	S39 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S48	6	S46 and S47	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S49	2	("2010/0147510").URPN.	USPAT	OR	ON	2013/02/26 10:13
S50	62	("5331318" | "5597042" | "5662165" | "5706892" | "5706896" | "5721538" | "5730219" | "5732776" | "5803167" | "5868201" | "5934371" | "5941307" | "5959547" | "5975204" | "5992250" | "6006832" | "6012015" | "6046685" | "6068053" | "6075462" | "6125938" | "6160492" | "6161618" | "6176312" | "6179057" | "6192980" | "6192988" | "6209640" | "6247536" | "6257332" | "6271766" | "6276454" | "6279660" | "6281489" | "6288975" | "6296066" | "6422315" | "6469636" | "6498988" | "6622799" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/26 10:14

		"6670880" | "6717501" | "6788980" | "6801135" | "6816082" | "6851444").PN. OR ("7261162").URPN.				
S51	11	("5941305" | "5959547" | "5978749" | "6061603" | "6670880").PN. OR ("6801135").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/26 10:18
S52	10	S39 and S44 and S38	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:21
S53	337	S39 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:22
S54	203	S53 and (internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:22
S55	387	(local autonomous independent) and S45	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:25
S56	381	S55 not S54	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:25
S57	501662	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:28
S58	8886	S57 and S39	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:29
S59	106	S58 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:29
S60	44	("20030004624" | "20040088115" | "20100147510" | "5732776" | "7931090" | "7967066" | "8312320" | "20130144531" | "8301386" | "20050108504" | "20100295673" | "20110231024" | "6061603" | "8386059" | "20100098507" | "20030182463" | "4052703" | "6192980" | "7958938" | "8373418" | "20130024026" | "20040231851" | "20060240818" | "7148812" | "7289994" | "20120316658" | "20040262008" | "7921916" | "8131510" | "8290737" | "20100326654" | "20020161685" | "20090149969" | "7845404" | "8179279" | "20020112860" | "20050096846" | "5149443" | "6801135" | "6913083" | "20130008645" | "20020169645" | "20080208475" | "7591308").PN.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/11 13:22
S61	37	(US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020161685-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:58

		7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6801135-$ or US-6061603-$ or US-6192980-$).did. or (WO-2008124765-$).did.				
S62	0	S61 and oscillate	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:58
S63	1	S61 and (stuck adj3 valve)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:59
S64	4400	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S65	5969	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S66	19220	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S67	804	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S68	475	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S69	30612	S64 S65 S66 S67 S68	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S70	172242	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S71	241	S69 and S70 and "240"	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S72	2175607	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S73	664	S69 and S70 and S72	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S74	6	S73 and (inoperative in-operative stuck) adj3 (valve part)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S75	94	S70 and (stuck) adj3 (valve)	US-	OR	ON	2013/06/12

			PGPUB; USPAT; EPO			08:14
S76	94	S70 and ((stuck) adj3 (valve))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:14
S77	109	S70 and ((frozen froze stuck) adj3 (valve))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:19
S78	12	((move jerk oscillate move) near2 ((frozen froze stuck) adj3 (valve)))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:21
S79	1	("4823749").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/06/12 08:22
S80	1	("20010032518").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/06/12 10:53
S81	35	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/12 11:14
S82	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S83	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S84	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S85	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S86	0	S85 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S87	7	S85 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S88	4795	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S89	2432	S88 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S90	889	S89 and (oil near2 well)	US-PGPUB;	OR	ON	2013/06/12 11:14

			USPAT; EPO			
S91	246	S90 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S92	2	S91 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S93	1458	S69 and S70	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S94	1900176	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S95	16083	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S96	664	S72 and S93	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S97	327	S96 and S94	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S98	343	S70 and S95	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S99	6	S97 and S98	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S100	10	S70 and S95 and S69	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S101	528886	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S102	9459	S101 and S70	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S103	110	S102 and S95	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S104	158	S81 S82 S83 S84 S86 S87 S92 S99 S100 S103	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S105	16	("2004/0262008").URPN.	USPAT	OR	ON	2013/10/25 12:32

S106	9	("20040262008" | "20050035875" | "4701756" | "5959547" | "6229453" | "6816082").PN. OR ("7148812").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/25 12:39
S107	1	("5959547").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/10/25 12:45
S108	4578	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S109	6150	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S110	20349	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S111	850	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S112	486	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S113	32148	S108 S109 S110 S111 S112	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S114	177528	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S115	2253717	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S116	36	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/25 12:46
S117	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S118	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S119	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S120	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S121	0	S120 and (oil near2 water near2 separation)	US-	OR	ON	2013/10/25

			PGPUB; USPAT; EPO			12:46
S122	7	S120 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S123	4935	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S124	2501	S123 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S125	917	S124 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S126	257	S125 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S127	2	S126 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S128	1540	S113 and S114	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S129	1987225	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S130	16785	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S131	707	S115 and S128	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S132	351	S131 and S129	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S133	357	S114 and S130	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S134	6	S132 and S133	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S135	10	S114 and S130 and S113	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S136	553323	(remote internet network) near2 (control monitor	US-	OR	ON	2013/10/25

		control$4 monitor$4 command)	PGPUB; USPAT; EPO			12:46
S137	9948	S136 and S114	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S138	117	S137 and S130	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S139	166	S116 S117 S118 S119 S121 S122 S127 S134 S135 S138	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S140	166	S139	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S144	4914	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S145	6494	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S146	22712	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S147	948	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S148	511	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S149	35297	S144 S145 S146 S147 S148	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S150	188122	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S151	2416039	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S152	38	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/07/22 16:19
S153	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19
S154	2	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19

S155	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19
S156	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S157	0	S156 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S158	7	S156 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S159	5262	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S160	2663	S159 and pump	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S161	969	S160 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S162	268	S161 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S163	4	S162 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S164	1686	S149 and S150	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S165	2171012	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S166	18312	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S167	776	S151 and S164	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S168	390	S167 and S165	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S169	383	S150 and S166	US-	OR	ON	2014/07/22

			PGPUB; USPAT; EPO			16:19
S170	8	S168 and S169	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S171	12	S150 and S166 and S149	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S172	605853	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S173	10936	S172 and S150	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S174	129	S173 and S166	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S175	178	S152 S153 S154 S155 S157 S158 S163 S170 S171 S174	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S176	178	S175	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S177	178	S176	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S178	2489	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:20
S179	645	S178 and S150	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S180	452	S179 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S182	15	S180 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S183	16	S178 and S166 and S165	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:29
S184	204	S182 S183 S177	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:29
S185	23	("4007450" | "4888726" | "5560005" | "5724575" |	US-	OR	ON	2015/02/23

		"5828851" | "5838563" | "5845230" | "5956483" | "6000045" | "6131120" | "6263487" | "6701437" | "6799077").PN. OR ("7289994").URPN.	PGPUB; USPAT; USOCR			16:41
S186	1	("20090055029").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2015/03/06 14:23
S187	46	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6801135-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 14:45
S188	2	S187 and pid	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 14:45
S189	5307	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S190	6733	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S191	24915	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S192	1044	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S193	530	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S194	38241	S189 S190 S191 S192 S193	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S195	197343	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S196	2561451	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT;	OR	ON	2015/03/06 16:10

			EPO			
S197	39	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2015/03/06 16:10
S198	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2015/03/06 16:10
S199	2	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2015/03/06 16:10
S200	6	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2015/03/06 16:10
S201	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S202	0	S201 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S203	7	S201 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S204	5538	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S205	2804	S204 and pump	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S206	1031	S205 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S207	287	S206 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S208	4	S207 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S209	1822	S194 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S210	2334181	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S211	19758	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10

S212	846	S196 and S209	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S213	432	S212 and S210	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S214	411	S195 and S211	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S215	10	S213 and S214	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S216	17	S195 and S211 and S194	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S217	652812	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S218	11860	S217 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S219	139	S218 and S211	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S220	192	S197 S198 S199 S200 S202 S203 S208 S215 S216 S219	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S221	192	S220	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S222	192	S221	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S223	2737	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S224	706	S223 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S225	492	S224 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S226	16	S225 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10

S227	16	S223 and S211 and S210	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S228	219	S226 S227 S222	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S229	219	S228	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S230	5577	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S231	6864	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S232	25873	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S233	1107	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S234	547	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S235	39674	S230 S231 S232 S233 S234	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S236	205047	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S237	2685982	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S238	43	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/21 08:46
S239	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S240	3	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S241	6	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S242	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46

		or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.				
S243	0	S242 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S244	7	S242 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S245	5794	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S246	2926	S245 and pump	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S247	1087	S246 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S248	297	S247 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S249	4	S248 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S250	1898	S235 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S251	2471267	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S252	21038	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S253	891	S237 and S250	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S254	452	S253 and S251	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S255	430	S236 and S252	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S256	10	S254 and S255	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S257	17	S236 and S252 and S235	US-	OR	ON	2015/09/21

			PGPUB; USPAT; EPO			08:46
S258	692562	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S259	12566	S258 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S260	153	S259 and S252	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S261	210	S238 S239 S240 S241 S243 S244 S249 S256 S257 S260	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S262	210	S261	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S263	210	S262	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S264	2965	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S265	752	S264 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S266	523	S265 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S267	16	S266 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S268	18	S264 and S252 and S251	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S269	239	S267 S268 S263	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S270	239	S269	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S271	239	S270	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2015/09/21 08:46

S276	6137	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S277	7043	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S278	26619	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S279	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S280	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S281	41214	S276 S277 S278 S279 S280	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S282	223345	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S283	2986529	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S284	60	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:13
S285	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S286	7	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S287	7	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S288	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S289	0	S288 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S290	7	S288 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S291	6407	(oil near2 water near2 separation)	US-	OR	ON	2016/12/07

			PGPUB; USPAT; EPO			16:13
S292	3258	S291 and pump	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S293	1220	S292 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S294	338	S293 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S295	6	S294 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S296	2046	S281 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S297	2802086	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S298	24197	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S299	976	S283 and S296	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S300	511	S299 and S297	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S301	499	S282 and S298	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S302	15	S300 and S301	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S303	22	S282 and S298 and S281	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S304	788452	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S305	14396	S304 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S306	185	S305 and S298	US-	OR	ON	2016/12/07

			PGPUB; USPAT; EPO			16:13
S307	262	S284 S285 S286 S287 S289 S290 S295 S302 S303 S306	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S308	262	S307	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S309	262	S308	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S310	3692	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S311	1005	S310 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S312	680	S311 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S313	20	S312 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S314	22	S310 and S298 and S297	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S315	293	S313 S314 S309	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S316	293	S315	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S317	293	S316	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S318	293	S317	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S319	81003	(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).cpc.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S320	46	(US-20040262008-$ or US-20020161685-$ or US-20090055029-$ or US-20120316658-$ or US-	US-PGPUB;	OR	ON	2016/12/07 16:13

		20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$).did. or (US-7289994-$ or US-6801135-$ or US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.	USPAT; EPO			
S321	4	S320 and (network adj2 (address addresses))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:19
S322	2	("20020018399").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:26
S323	13	("5941305" | "5959547" | "5978749" | "6061603" | "6670880").PN. OR ("6801135").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:27
S324	47	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:28
S325	29	S324 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:28
S326	12	S325 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:29
S327	2	("7096092").PN.	US-PGPUB;	OR	OFF	2016/12/07 16:29

			USPAT; FPRS; EPO			
S328	1	("6967589").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:31
S329	91	("5438329" | "5717718" | "5963650" | "6062095" | "6169488" | "6305471" | "6356205" | "6369715" | "6574652" | "6693553" | "6795319").PN. OR ("6967589").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:32
S330	47	S329 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:33
S331	23	S330 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:33
S332	2	("20090055029").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:34
S333	2	("20100033318").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:35
S334	51	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 12:05
S335	20	S334 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 12:05
S336	13	S335 and (address addresses)	US-PGPUB; USPAT; FPRS;	OR	ON	2016/12/08 12:22

			EPO			
S337	48	(US-20120029661-$ or US-20080077512-$ or US-20100179669-$ or US-20040125141-$ or US-20040075689-$ or US-20040064205-$ or US-20120041570-$ or US-20050027377-$ or US-20050027376-$ or US-20110173556-$ or US-20080208380-$ or US-20070179641-$ or US-20050120288-$ or US-20040186927-$ or US-20030233438-$ or US-20030225650-$ or US-20030107591-$ or US-20090327942-$ or US-20080189638-$ or US-20080125877-$ or US-20080065706-$ or US-20080065705-$ or US-20080034047-$ or US-20070239291-$).did. or (US-6931288-$ or US-7515977-$ or US-8677262-$ or US-8533619-$ or US-8356257-$ or US-7680546-$ or US-7526794-$ or US-6889096-$ or US-8516383-$ or US-7971151-$ or US-7783370-$ or US-7729792-$ or US-7526347-$ or US-7152072-$ or US-7117052-$ or US-7043311-$ or US-6834370-$ or US-6735596-$ or US-6442512-$ or US-6434500-$ or US-5631825-$ or US-6445963-$ or US-6522934-$ or US-6247020-$).did.	US-PGPUB; USPAT	OR	ON	2016/12/08 12:28
S338	24	S337 and (address addresses)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:31
S339	17	S337 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:31
S340	13	S338 and S339	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:32
S341	2230	(web html) near4 (control controlling) near4 (actuator controller valve)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:48
S342	6137	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S343	7043	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S344	26619	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S345	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S346	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48

S347	41214	S342 S343 S344 S345 S346	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S348	81068	(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).cpc.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:48
S349	120388	S348 S347	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:48
S350	155	S341 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:49
S351	145	S349 and S341	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:53
S352	387	((web html) near4 (control controlling) near4 (actuator controller valve)).ab.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:53
S353	20	S349 and S352	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S354	19	S352 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S355	34	S353 S354	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S356	2	("20020018399").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/08 14:01
S357	1	("5805926").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 08:48
S358	2	("20030052180").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 08:55
S359	1	("6967589").PN.	US-PGPUB;	OR	OFF	2016/12/09 10:24

			USPAT; FPRS; EPO			
S360	54	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$ or US-20080077512-$ or US-20030052180-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$ or US-5805926-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/09 11:51
S361	2	S360 and thread	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:51
S362	2	S360 and (leak adj4 sensor)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:51
S363	8	S360 and (private)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
S364	6	S360 and (carrier)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
S365	2	S360 and (validity)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
S366	1	("20020156837").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:11
S367	1	("6799195").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:15
S368	2	("20110051645").PN.	US-	OR	OFF	2016/12/09

			PGPUB; USPAT; FPRS; EPO			12:34
S369	3	("5546301").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:55
S370	127	("5247447" | "5272642" | "5353229").PN. OR ("5546301").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/09 12:55
S371	21	S370 and thread	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 12:55
S372	38793	(thread near4 (actuator sensor gui synchronize data))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
S373	6873	(thread near4 (actuator sensor gui synchronize data)).ab.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
S374	6416	(thread near4 (actuator sensor gui synchronize data)).clm.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
S375	38793	S372 S373 S374	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
S376	11652	S373 S374	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
S377	625	S375 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
S378	157	S376 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
S379	0	(thread near4 (actuator and sensor and synchronize and data))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:02
S380	144	(thread near4 (actuator and sensor))	US-PGPUB; USPAT;	OR	ON	2016/12/09 13:02

			FPRS; EPO			
S381	10	S380 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:02
S382	10	("6249241" | "5819271" | "6810386" | "5805082" | "5875305" | "6208938").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2017/03/23 12:39

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S141	0	(translating plurality commands translated commands encoded plurality protocols different from the first protocol each translated command being translated into a protocol among the plurality of protocols suitable for a fluid handling device to which the respective command is directed the at least some of the translated command being operative to cause a local controller of the given fluid-handling device to drive the given fluid-handling device to the plurality of different target states the local controller being responsive to the translated commands and feedback from the given fluid handling device indicative of whether the given fluid handling device is in a targeted state).clm.	US-PGPUB; USPAT	AND	ON	2013/10/25 13:15
S142	0	(translating plurality commands translated commands encoded plurality protocols different from the first protocol each translated command being translated into a protocol among the plurality of protocols suitable for a fluid handling device to which the respective command is directed the at least some of the translated command being operative to cause a local controller of the given fluid-handling device).clm.	US-PGPUB; USPAT	AND	ON	2013/10/25 13:16
S143	0	(sending the translated commands to respective local controllers of the respective fluid handling devices to which the respective commands are directed).clm.	US-PGPUB; USPAT	AND	ON	2013/10/25 13:16
S272	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions comprises after receiving the instructions determining a plurality of different target states of the at least one of the fluid handling devices, the plurality of different states each corresponding to different times after determining the plurality of different target states translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols the one or more translated instructions including the determined plurality of different target states).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51

S273	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions comprises after receiving the instructions determining a plurality of different target states of the at least one of the fluid handling devices).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51
S274	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51
S275	0	(the plurality of different states each corresponding to different times after determining the plurality of different target states translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols the one or more translated instructions including the determined plurality of different target states).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51

3/23/2017 2:32:17 PM
C:\Users\ceverett\Documents\EAST\Workspaces\14984422-RemoteControlOilGas.wsp

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Aaron Phillips	§	
	§	Group Art Unit: 2121
	§	Confirmation No.: 1094
Serial No.: 14/984,422	§	Examiner: Everett, Christopher E
Filed: 30 December 2015	§	
	§	
For: Remote Control Of Fluid-Handling Devices	§	Atty. Docket: 034392-0444743
	§	

Mail Stop Amendment
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:

21 March 2017	/Joshua Tucker/
Date	Joshua Tucker

Commissioner:

AMENDMENT AND RESPONSE
TO NON-FINAL REJECTION ISSUED 21 DECEMBER 2016

In response to the above-noted office action, Applicants amend and remark as follows.

Authorization for Extensions of Time and Payment of Fees

In accordance with 37 C.F.R. § 1.136, Applicants hereby provide 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. (original) A hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising:

a computer-implemented datastore storing:

a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and

network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators;

a computer-implemented facility-interface module or modules configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections; and

a computer-implemented web-interface module or modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices,

wherein the system is configured to receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, identify a network address in the datastore corresponding to a facility at which the actuator is located, and send instructions with the facility-interface module or modules to the facility to actuate the actuator.

2. (currently amended) The system of claim 1, wherein the sensors include a tank level sensor of a tank at one of the facilities, and wherein the datastore includes a record associating the tank with the facility, data from the tank being unavailable to users

without an account associated with the tank, and wherein the accounts:

designate oil or gas facilities to which a given user is authorized to send the user command to actuate the actuator;

include a first account corresponding to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities; and

include a second account corresponding to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities.

3. (original) The system of claim 1, wherein the sensors include a level sensor of an oil/water separation tank at one of the facilities configured to indicate a level at which oil meets water, and wherein the datastore includes a record associating the tank with the facility.

4. (original) The system of claim 1, wherein the sensors include a leak detector at one of the facilities, and wherein the datastore includes a record associating the leak detector with the facility.

5. (original) The system of claim 1, wherein:

the web-interface module or modules comprises a web server; and

the facility-interface module or modules comprises a site server distinct from the web server.

6. (original) The system of claim 5, wherein:

the web server communicates with user devices via a first network port of a computing device executing the web server; and

the site server communicates with facilities via a second network port of the computing device, the second network port being different from the first network port.

7. (original) The system of claim 1, wherein:

the data store stores subscription information associated with at least some of the accounts.

8. (original) The system of claim 1, wherein the facility-interface module or modules comprise:

means for interfacing with a plurality of site controllers associated with the facilities.

9. (original) The system of claim 1, wherein the web-interface module or modules comprise:

means for sending instructions to present a control interface on the user devices.

10. (original) The system of claim 1, wherein the datastore stores accounts for more than one hundred facilities, and the web-interface module or modules are configured interface with more than one hundred user devices.

11. (original) The system of claim 1, wherein the facility-interface module or modules are configured to send pull requests to facilities to retrieve data buffered at the facilities.

12. (original) The system of claim 1, comprising:

a controller at one of the facilities communicatively coupled to an actuator or a sensor.

13. (currently amended) The system of claim 12, wherein the system is configured to instantiate at least four of the following ~~comprising at least four of the following~~ as distinct threads from one another:

a thread configured to sends and receive data requests;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

14. (currently amended) The system of claim 12, , wherein the system is configured to instantiate at least ~~comprising at least~~ two of the following as distinct threads from one another:

a thread configured to sends or receive data request;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

15. (original) The system of claim 12, wherein the controller is communicatively coupled to the actuator or sensor via a private local area network.

16. (original) The system of claim 12, wherein controller is communicatively coupled to the actuator or sensor via a frame-based carrier-sense multiple access protocol with collision detection.

17. (original) The system of claim 12, wherein controller is configured to periodically push buffered data to the facility-interface module or modules.

18. (original) The system of claim 12, comprising:

means for ensuring at least some data is not lost if network access ceases intermittently.

19. (original) The system of claim 12, comprising:

means for translating a command for an actuator from an input format to a format configured to effectuate changes in the actuator.

20. (original) The system of claim 19, comprising:

means for executing control routines implicated by translated commands on an individual actuator or sensor.

21. (original) The system of claim 12, comprising:

means for transmitting data to the facility-interface module or modules.

22. (original) The system of claim 12, comprising:

means for checking validity of a command.

23. (original) The system of claim 12, comprising:

an oil or gas facility communicatively coupled to the controller.

REMARKS

In the office action, the Examiner rejected claims 1-23 and objected to claim 13-14. By this response, Applicants amend claims 2, 13, and 14. The amendments are made to clarify the claim language and narrow the distinction between broadest reasonable interpretation applied by the Examiner and the interpretation that one of ordinary skill in the art would reach. As such, the present amendments should not affect rights available under the doctrine of equivalents. 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, Applicants respectfully request consideration and allowance of all pending claims.

Claim Objections

In the office action, the Examiner objected to claims 13-14 for reciting "threads." Without conceding the merits of the objection, to expedite allowance, the claims have been amended to moot the rejection. Applicants respectfully ask that the rejection be withdrawn.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1-23 as allegedly obvious on the following grounds:

1) claims 1, 5, 7-10, 12, 18-21, and 23 were rejected over U.S. Pat. Pub. 20020161685 ("Dwinnell"), U.S. Pat. Pub. 20020018399 ("Schultz"), and U.S. Pat. Pub. 20030052180 ("Huhn");

2) claims 2, 11, and 17 were rejected over Dwinnell, Schultz, Huhn, and U.S. Pat. 6,967,589 ("Peters");

3) claim 3 was rejected over Dwinnell, Schultz, Huhn, and U.S. Pat. 5,149,443 ("Varnam");

4) claim 4 was rejected over Dwinnell, Schultz, Huhn, and U.S. Pat. 7,967,066 ("McStay");

5) claims 6 and 15 were rejected over Dwinnell, Schultz, Huhn, and U.S. Pat. Pub. 20020156837 ("Batke");

6) claims 13 and 14 were rejected over Dwinnell, Schultz, Huhn, and U.S. Pat. Pub. 20050084988 ("Huang");

7) claim 16 was rejected over Dwinnell, Schultz, Huhn, and U.S. Pat. Pub. 20110051645 ("Hong"); and

8) claim 22 was rejected over Dwinnell, Schultz, Huhn, and U.S. Pat. 4,052,703 ("Collins").

The pending claims, however, are distinct from and allowable over the art cited in these rejections for at least the reasons explained below.

Legal Precedent and Guidelines

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness depends on several underlying factual inquiries:

> Under §103, the scope and content of the prior art are to be determined, differences between the prior art and the claims at issue are to be ascertained, and the level of ordinary skill in the pertinent art are to be resolved. Against this background the obviousness or non-obviousness of the subject matter is to be determined. Such secondary considerations as commercial success, long-felt but unresolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406, 127 S.Ct. 1727, 167 L.Ed.2d 705 (2007) (quoting *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966)).

As explained by the Court in *KSR International Co. v. Teleflex Inc*, "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

The cited references, taken alone or in hypothetical combination, fail to teach or suggest features recited by independent claim 1

Independent claim 1 recites the following:

> a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities.

These features are not taught in the art of record, and for at least for this reason, the pending claims are allowable.

For this feature, the rejection cites Dwinnell, which teaches that webcams can be placed at drilling sites to watch the progress of workers drilling a well. *See* Dwinnell, para. 15. The rejection relies on paragraphs 57, 67, and 68 and figures 6A and 6B of the reference. Office action, page 5.

Dwinnell does not teach or suggest the above-quoted features of claim 1. Dwinnell teaches a system that hosts and streams video and data for a single entity drilling a plurality of wells, with different features offered to different users based on their level of access. *See* Dwinnell, para. 57. Access is mediated by feature, not be well. *See id.* (stating "[u]sers sign up for access to certain restricted features."). Users have a "level of access" to these features, presumably offering more data streams, reports, or alarms on the same set of wells to users who pay for a higher-level of service. *See id.* Indeed, Dwinnell's system is depicted in figures 1 and 6A (shown below, with multiple "ventures" listed) as granting access to data from every well to a user with a sufficiently high level of access.

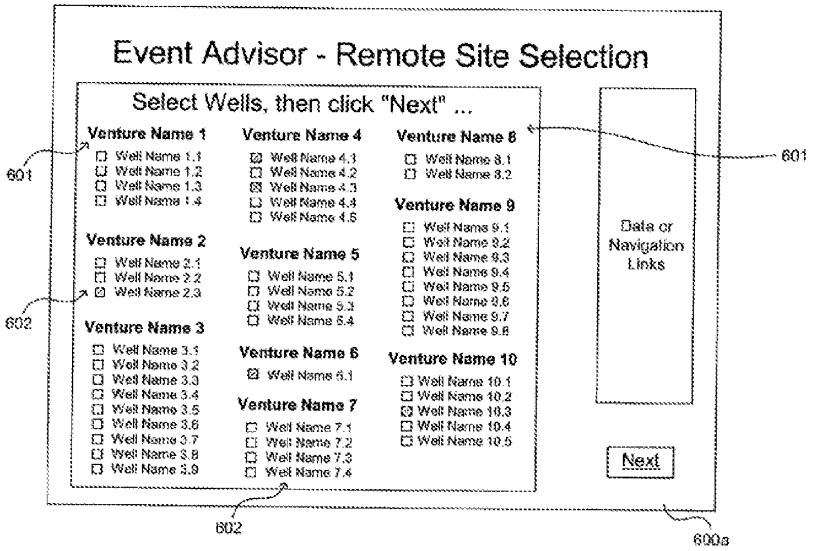


FIG. 6A

Thus, Dwinnell does not teach of suggest "a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities," as claimed.

The dependent claims incorporate the features of the independent claims from which they depend. Moreover, the other cited references used in the other rejections do no cure the above-described distinctions from the references used to reject the independent claims. Thus, for at least the reasons discussed above with reference to the independent claims, the dependent claims are allowable.

The cited references, taken alone or in hypothetical combination, fail to teach or suggest features recited by dependent claim 2

Dependent claim 2 states that the user accounts "designate oil or gas facilities to which a given user is authorized to send the user command to actuate the actuator" among other features. These features are not taught or suggested by the art of record.

Dwinnell does not teach selective remote control of oil and gas related facilities, in part, because the system of Dwinnell is designed to operate when people are present at the facility. Dwinnell describes webcams for drilling operations, i.e., the part of a well's life cycle when people are present to run the drilling equipment. *See* Dwinnell, abstract, para. 15. Because people are present, there is no reason to exercise remote control.

In contrast, claim 2 recites features by which different users remotely control their oil or gas facilities (e.g., after drilling, during production, when people are not present for the reasons described in paragraphs 3 and 4 of the Background of the present application), where different users have access to control different facilities.

Dwinnell's system is not suited for account-by-account mediation of remote control of oil-or-gas facilities, in part because the data model for accounts in Dwinnell is different from that described above in claim 1 and, in part, because Dwinnell does not teach how to use the accounts to selectively provide access for control purposes. For this reason as well, claim 2 is allowable.

Huhn is not properly combined with the other references because Huhn is non-analogous art

Non-analogous art cannot properly be pertinent prior art under 35 U.S.C. § 103. In re Pagliaro, 210 U.S.P.Q. 888, 892 (C.C.P.A. 1981). For the teachings of a reference to be prior art under 35 U.S.C. § 103, there must be some basis for concluding that the reference would have been considered by one skilled in the particular art working on the particular problem with which the invention pertains. *In re Horne*, 203 U.S.P.Q. 969, 971 (C.C.P.A. 1979). The determination of whether a reference is from a non-analogous art is set forth in a two-step test given in *Union Carbide Corp. v. American Can Co.*, 724 F.2d 1567, 220 U.S.P.Q. 584 (Fed. Cir. 1984). In *Union Carbide*, the court found that the first determination was whether "the reference is within the field of the inventor's endeavor." If it is not, one must proceed to the second step "to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved." In regard to the second step, *Bott v. Fourstar Corp.*, 218 U.S.P.Q. 358 (E.D. Mich. 1983) determined that "analogous art is that field of art which a person of ordinary

skill in the art would have been apt to refer in attempting to solve the problem solved by a proposed invention." "To be relevant the area of art should be where one of ordinary skill in the art would be aware that similar problems exist." *Id.*

In Huhn, "an apparatus is provided for use in a HVAC system." Huhn, para. 5. The inventors field of endeavor (for the present claims) relates multi-tenant software-as-a-service (SaaS) systems for remote control and monitoring of oil and gas related facilities. Huhn, thus, is not in the inventors' field of endeavor.

Huhn is not reasonably pertinent to the particular problem with which the inventors were involved. The present application explains that the inventors sought to provide, among other things, in order to address the problems in the first two paragraphs of the Background, "a web interface in a web browser on user devices…, 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." Application, para. 17. HVAC equipment is not pertinent to this problem.

Thus, Huhn is neither in the inventors' field of endeavor or reasonably pertinent to the particular problem with which the inventors were involved. As such, Huhn is not properly combined in a Section 103 rejection of the present claims.

Reservation of Arguments

Above, Applicants identify 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, Applicants have refrained from providing an exhaustive explanation of every basis for allowing the claims. Accordingly, Applicants reserve the right to identify other grounds for overcoming the present rejections and the cited art, and Applicants reiterate that the amendments and arguments above are made without prejudice, including to rights available under the doctrine of equivalents.

Conclusion

Applicants respectfully submit 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: 21 March 2017

/Joshua Tucker/

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

Electronic Acknowledgement Receipt	
EFS ID:	28691157
Application Number:	14984422
International Application Number:	
Confirmation Number:	1094
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Customer Number:	909
Filer:	Joshua L. Tucker/Kathryn Seeman
Filer Authorized By:	Joshua L. Tucker
Attorney Docket Number:	034392-0444743
Receipt Date:	21-MAR-2017
Filing Date:	30-DEC-2015
Time Stamp:	16:23:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		034392_0444743_Response_to_Non_Final_Office_Action_filed_21MAR2017.pdf	289958 f5115a9c6f785f0506dc606e6e9937d5853ed44d	yes	13

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	13
Warnings:			
Information:			
	Total Files Size (in bytes):	289958	

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 a 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.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/984,422	Filing Date 12/30/2015	☐ To be Mailed

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 $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ 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 **03/21/2017**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 23	Minus	** 23	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 1	Minus	***3	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ 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.
** 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 number found in the appropriate box in column 1.

LIE
TAMMY D. MCBETH BROWN

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.

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.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

909 7590 12/21/2016
Pillsbury Winthrop Shaw Pittman, LLP
PO Box 10500
McLean, VA 22102

EXAMINER	
EVERETT, CHRISTOPHER E	

ART UNIT	PAPER NUMBER
2121	

NOTIFICATION DATE	DELIVERY MODE
12/21/2016	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

Office Action Summary	Application No. 14/984,422	Applicant(s) PHILLIPS, AARON	
	Examiner Christopher E. Everett	Art Unit 2121	AIA (First Inventor to File) Status No

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/30/2015*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ 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.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *1-23* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-23* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, 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.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *12/30/2015* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ 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)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. The present application is being examined under the pre-AIA first to invent provisions.

2. Claims 1-23 are pending.

Claim Objections

3. Claims 13-14 are objected to because of the following informalities: "threads" are ambiguous as to the metes and bounds of the limitation. In particular, claim 1 is directed to a system with components (i.e., computer-implemented datastore, computer-implemented modules) but claims 13-14 add threads (i.e., software per se) so it is unclear how the system with components includes software by itself. Applicant is advised that the terminology should be clarified to remove the ambiguity (e.g., memory storing instructions for threads and processor executing the threads). Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of 35 U.S.C. 112(f):

> (f) Element in Claim for a Combination. – An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The following is a quotation of pre-AIA 35 U.S.C. 112, sixth paragraph:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Use of the word "means" (or "step for") in a claim with functional language creates a rebuttable presumption that the claim element is to be treated in accordance with 35 U.S.C. 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph). The presumption that 35 U.S.C. 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph) is invoked is rebutted when the function is recited with sufficient structure, material, or acts within the claim itself to entirely perform the recited function.

Absence of the word "means" (or "step for") in a claim creates a rebuttable presumption that the claim element is not to be treated in accordance with 35 U.S.C. 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph). The presumption that 35 U.S.C. 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph) is not invoked is rebutted when the claim element recites function but fails to recite sufficiently definite structure, material or acts to perform that function.

Claim elements in this application that use the word "means" (or "step for") are presumed to invoke 35 U.S.C. 112(f) except as otherwise indicated in an Office action. Similarly, claim elements that do not use the word "means" (or "step for") are presumed not to invoke 35 U.S.C. 112(f) except as otherwise indicated in an Office action.

Claim Rejections - 35 USC § 103

5. 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 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.

6. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1, 5, 7-10, 12, 18-21, and 23 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn).

Claim 1:

Dwinnell describes a hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising: **(Dwinnell: "Embodiments of the present invention as disclosed collect live productivity data and streaming media information broadcast from remote sites of interest (such as oil and gas drilling locations, construction sites, etc.) in real-time into a collection and distribution network that delivers this data and information to investors and managers via the Internet via a dynamic web page interface." abstract)**

- a computer-implemented datastore storing: **(Dwinnell: see the database system 303 of the central system 102 as illustrated in figure 3 and as described in paragraph 0057)**
    - a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and **(Dwinnell: see the accounts and the various ventures and wells as described in paragraphs**

0057, 0067, 0068 and as illustrated in figures 6A, 6B; "Retrieval by web site users (investors and managers) of information and data stored in the archive system 302 or the database system 303 is controlled by standard authentication and authorization protocols. Users sign up for access to certain restricted features of the dynamic web site and receive a username and password to access desired information. Once a user has received an account, he is able to login into various otherwise-restricted web pages and thus be presented with a dynamically generated web page representative of the level of access that the user's particular account possesses." Paragraph 0057)

- a computer-implemented facility-interface module or modules configured to **(Dwinnell: see the central collection and distribution system 102 as illustrated in figures 1, 3 and as described in paragraph 0031)**
    - obtain data from the sensors at the facilities and **(Dwinnell: "Each remote site system 101 gathers information and data from a particular remote site (i.e., an oil and gas drilling site or rig) and transmits the information and data to a central collection and distribution system 102 at least partially in the form of streaming media, and preferably digital streaming video." Paragraph 0031)**
- a computer-implemented web-interface module or modules configured to **(Dwinnell: see the web platform system 305 of the central system 102 as illustrated in figure 3 and as described in paragraphs 0051, 0054)**

- send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to **(Dwinnell: see the interfaces in web browsers along with delivered data from the web-server to the web browser as illustrated in figures 4, 5, 6A, 6B and as described in paragraphs 0063, 0064, 0065, 0066)**

Dwinnell does not explicitly describe sending commands as described below. However, Schultz teaches the sending commands as described below.

- send commands to the actuators at the facilities via the cellular network connections; and **(see the sending of commands to actuators in Schultz and the use of a cellular network in Dwinnell; Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048; Dwinnell: "The remote site system 101 further includes a remote site transmission device 203 for connecting to and sending streaming media information and other data to the central system 102. Preferably, the transmission device 203 should be capable of 64 Kb/s or greater telecommunication bandwidth and can comprise a cellular or land-line high**

speed modem, microwave, ADSL, ISDN line, LAN/WAN, etc., and most preferably comprises a portable VSAT satellite receiver/transmitter and antenna." Paragraph 0044))

- receive commands to control actuators from the user computing devices, **(Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)**

- wherein the system is configured to
  - receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, **(Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)**

- send instructions with the facility-interface module or modules to the facility to actuate the actuator. **(Schultz: "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, with the known techniques of Schultz, namely, a web server based interface for oil well information and control, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells with the teachings of Schultz to use a web interface to view information and control devices in oil wells would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells of Dwinnell based on the teachings of remote control of oil wells in Schultz).

Dwinnell and Schultz do not explicitly describe network addresses as described below. However, Huhn teaches the network addresses as described below.

- network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators; **(see the stored network addresses for actuators in Huhn and the cell network communication in Dwinnell; Huhn: see the store address to eeprom 330 as illustrated in figure 9; "In accordance with a preferred embodiment of the present invention, the address for an actuator is stored in the EEPROM 130. As mentioned, each of the actuators of the system are identical." Paragraph 0042; Dwinnell: "The remote site system 101 further includes a remote site transmission device 203 for connecting to and sending streaming media information and other data to the central system 102. Preferably, the transmission device 203 should be capable of 64 Kb/s or greater telecommunication bandwidth and can comprise a cellular or land-line high speed modem, microwave, ADSL, ISDN line, LAN/WAN, etc., and most preferably comprises a portable VSAT satellite receiver/transmitter and antenna." Paragraph 0044)**
- identify a network address in the datastore corresponding to a facility at which the actuator is located, and **(Huhn: see the find address in look-up table 328 as illustrated in figure 9; "An address from the stored desired addresses is selected (328) from the look-up table of all addresses of the mounted actuator in response to the at least one operating parameter (316, 324, 326)." Abstract; "Each of the actuators 50-54 have an associated address. When the HVAC controller 30 wants to command one of the actuators to move that**

actuator's associated conduit door, it transmits a two part serial communication signal on the command line 64 connected to all actuators. The first part of the serial communication is an actuator address for that actuator to be commanded. The second part of the serial communication is the command to further open or further close the conduit door. All other actuators ignore the command when the address portion of the serial communication does not match its stored address." Paragraph 0041)

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, and the known techniques of Schultz, namely, a web server based interface for oil well information and control, with the teachings of Huhn, namely, using addresses to control actuators in a process control system, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells and the teachings of Schultz to use a web interface to view information and control devices in oil wells with the teachings of Huhn to control actuators using addresses would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing of Dwinnell based on the teachings of remote control of oil wells in Schultz and the teachings of controlling actuators using addressing in Huhn).

Claim 5:

Dwinnell describes the system of claim 1, wherein:

- the web-interface module or modules comprises a web server; and **(Dwinnell: "The web platform system 305, comprising one or more web servers, communicates directly with each user's computer (running a web browser application) via the Internet and retrieves and serves, in a suitable hardware independent page description language (such as HTML, XML, and java), requested data from the database system 303, live streaming broadcasts and associated data from the broadcast system 304, and archived streams and associated data from the archive system 302." Paragraph 0054; see the web platform system 305 of the central system 102 as illustrated in figure 3 and as described in paragraphs 0051, 0054)**
- the facility-interface module or modules comprises a site server distinct from the web server. **(Dwinnell: "Incoming streamed media is received by the central system transmission device 103 and sent directly to the collection system 301 where it is identified." Paragraph 0052; "Each of the systems 301-305 that comprise the central system 102 are composed of suitable servers, storage devices (including databases), memory devices and support hardware as is known in the art of computer networks to achieve the functions of each system 301-305." Paragraph 0051)**

Claim 7:

Dwinnell describes the system of claim 1, wherein: the data store stores subscription information associated with at least some of the accounts. **(Dwinnell: see the accounts and the various ventures and wells as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B; "Retrieval by web site users (investors and managers) of information and**

data stored in the archive system 302 or the database system 303 is controlled by standard authentication and authorization protocols. Users sign up for access to certain restricted features of the dynamic web site and receive a username and password to access desired information. Once a user has received an account, he is able to login into various otherwise-restricted web pages and thus be presented with a dynamically generated web page representative of the level of access that the user's particular account possesses." Paragraph 0057)

Claim 8:

Dwinnell describes the system of claim 1, wherein the facility-interface module or modules comprise: means for interfacing with a plurality of site controllers associated with the facilities. **(Dwinnell: see the central system transmission device 103 interfacing with the remote site systems 101 as illustrated in figure 1 and as described in paragraph 0034; "First, a continuous stream is sent from each remote site system 101 to the central collection and distribution system 102 via the central system transmission device 103 (such as a high speed modem, LAN, WAN or VSAT satellite transmitter/receiver)." Paragraph 0034)**

Claim 9:

Dwinnell describes the system of claim 1, wherein the web-interface module or modules comprise: means for sending instructions to present a control interface on the user devices. **(Dwinnell: see the interfaces in web browsers along with delivered data from the web-**

server to the web browser as illustrated in figures 4, 5, 6A, 6B and as described in paragraphs 0063, 0064, 0065, 0066)

Claim 10:

Dwinnell describes the system of claim 1,

- wherein the datastore stores accounts for more than one hundred facilities, and **(Dwinnell: "As is apparent from FIG. 1, the network 100 can be expanded or contracted to include any number of remote site systems 101 or investors/managers 105 as is necessitated." Paragraph 0031)**
- the web-interface module or modules are configured interface with more than one hundred user devices. **(Dwinnell: "As is apparent from FIG. 1, the network 100 can be expanded or contracted to include any number of remote site systems 101 or investors/managers 105 as is necessitated." Paragraph 0031)**

Claim 12:

Dwinnell describes the system of claim 1, comprising: a controller at one of the facilities communicatively coupled to an actuator or a sensor. **(Dwinnell: "The remote site system 101 comprises a remote site video and data capture server 202 (hereinafter referred to as a remote site capture server 202 or "RSCS 202") in electronic communication with a plurality of cameras 205 positioned strategically about the remote site." Paragraph 0039)**

Claim 18:

Dwinnell describes the system of claim 12, comprising: means for ensuring at least some data is not lost if network access ceases intermittently. **(Dwinnell: "Preferably, the remote site system 101 also includes a storage medium (not explicitly shown in FIG. 2) for archiving a local copy of said collected data and streams such that such information and data will not be permanently lost in the case oc communication problems with the central system 100." Paragraph 0044)**

Claim 19:

Dwinnell does not explicitly describe translating a command as described below. However, Schultz teaches the translating a command as described below.

Dwinnell and Schultz describe the system of claim 12, comprising: means for translating a command for an actuator from an input format to a format configured to effectuate changes in the actuator. **(Schultz: see the converter 26 converting optical signals into electrical signals for control of an actuator as illustrated in figures 1, 2 and as described in paragraphs 0032, 0042; "Accordingly, the well tool 10 includes a converter 26 for converting electrical signals generated by the webserver 22 into optical signals for transmission via the fiber optic line(s) of the cable 24." Paragraph 0032; "In a described embodiment, a well tool includes a webserver connected to a sensor and an actuator of the tool." Abstract; "The actuators 88, 90, 92 maybe electrically, hydraulically or otherwise operated." Paragraph 0042)**

Dwinnell and Schultz are combinable for the same rationale as set forth above with respect to claim 1.

Claim 20:

Dwinnell does not explicitly describe executing control routines as described below. However, Schultz teaches the executing control routines as described below.

Dwinnell and Schultz describe the system of claim 19, comprising: means for executing control routines implicated by translated commands on an individual actuator or sensor. **(Schultz: see the converter 26 converting optical signals into electrical signals for control of an actuator as illustrated in figures 1, 2 and as described in paragraphs 0032, 0042; "Accordingly, the well tool 10 includes a converter 26 for converting electrical signals generated by the webserver 22 into optical signals for transmission via the fiber optic line(s) of the cable 24." Paragraph 0032; "In a described embodiment, a well tool includes a webserver connected to a sensor and an actuator of the tool." Abstract; "The actuators 88, 90, 92 maybe electrically, hydraulically or otherwise operated." Paragraph 0042; "In addition, a corresponding one of the actuators 88, 90, 92 may be controlled via the respective web page to operate the associated device 80 or 82. Thus, in the system 68, a person with a connection to the Internet 102 at a remote location may, for example, monitor a pressure drop across or a flow rate through the device 80 and, based on this information, operate the actuator 88 to adjust the pressure drop or flow rate, or to close the device, as desired." Paragraph 0048)**

Dwinnell and Schultz are combinable for the same rationale as set forth above with respect to claim 1.

Claim 21:

Dwinnell describes the system of claim 12, comprising: means for transmitting data to the facility-interface module or modules. **(Dwinnell: "Each remote site system 101 gathers information and data from a particular remote site (i.e., an oil and gas drilling site or rig) and transmits the information and data to a central collection and distribution system 102 at least partially in the form of streaming media, and preferably digital streaming video." Paragraph 0031)**

Claim 23:

Dwinnell describes the system of claim 12, comprising: an oil or gas facility communicatively coupled to the controller. **(Dwinnell: "Embodiments of the present invention as disclosed collect live productivity data and streaming media information broadcast from remote sites of interest (such as oil and gas drilling locations, construction sites, etc.) in real-time into a collection and distribution network that delivers this data and information to investors and managers via the Internet via a dynamic web page interface." abstract)**

9. Claims 2, 11, and 17 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S.

Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent No. 6,967,589 (Peters).

Claim 2:

Dwinnell, Schultz, and Huhn do not explicitly describe tank sensors as described below. However, Peters teaches the tank sensors as described below.

Dwinnell, Schultz, Huhn, and Peters describe the system of claim 1,

- wherein the sensors include a tank level sensor of a tank at one of the facilities, and **(Peters: "Monitoring unit 120, connected to oil tank 95, measures the pressure at the bottom of the tank. With that information, as well as the diameter of the oil tank 95 and the specific gravity of the oil in the oil tank 95, the amount of oil in oil tank 95 can be determined by a formula as is known to those of skill in the art. Likewise, monitoring unit 130, connected to water tank 98, measures the pressure at the bottom of water tank 98. With that information, as well as the diameter of the water tank 98 and the specific gravity of water, the amount of water in water tank 98 can be determined by a formula as is known to those of skill in the art. In each case, additional sensors can be used, e.g., trip level sensors in the tanks. Other methods of measuring can be used, such as, infrared, microwave and float sensors." Col. 5, line 61 through col. 6, line 7)**
- wherein the datastore includes a record associating the tank with the facility, **(see the tanks in Peters and the association of ventures to wells in Dwinnell; Peters: see the**

tanks 95, 98 as illustrated in figure 1; Dwinnell: see the ventures (i.e., facility) and the associated wells (i.e., equipment) as illustrated in figure 6A and as described in paragraph 0067)

- data from the tank being unavailable to users without an account associated with the tank. **(see the tanks in Peters and the availability and unavailability of data for accounts in Dwinnell; Peters: see the tanks 95, 98 as illustrated in figure 1; Dwinnell: see the accounts and the various ventures and wells as described in paragraphs 0057, 0067, 0068 and as illustrated in figures 6A, 6B; "Retrieval by web site users (investors and managers) of information and data stored in the archive system 302 or the database system 303 is controlled by standard authentication and authorization protocols. Users sign up for access to certain restricted features of the dynamic web site and receive a username and password to access desired information. Once a user has received an account, he is able to login into various otherwise-restricted web pages and thus be presented with a dynamically generated web page representative of the level of access that the user's particular account possesses." Paragraph 0057)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Peters, namely, monitoring a gas/oil well, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the

teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Peters to use tank sensors to monitor a gas/oil well would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring using sensors and control of oil wells using actuator addressing of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of monitoring an oil/gas well with tank sensors in Peters).

Claim 11:

Dwinnell, Schultz, and Huhn do not explicitly describe pull requests as described below. However, Peters teaches the pull requests as described below.

Dwinnell, Schultz, Huhn, and Peters describe the system of claim 1, wherein the facility-interface module or modules are configured to send pull requests to facilities to retrieve data buffered at the facilities. **(Peters: "Relay unit 140 can query each, some or all of the monitoring units 100, 110, 120 and 130 or receive data and requests from each, some or all of them." Col. 6, lines 32-35)**

Dwinnell, Schultz, Huhn, and Peters are combinable for the same rationale as set forth above with respect to claim 2.

Claim 17:

Dwinnell, Schultz, and Huhn do not explicitly describe pushes as described below. However, Peters teaches the pushes as described below.

Dwinnell, Schultz, Huhn, and Peters describe the system of claim 12, wherein controller is configured to periodically push buffered data to the facility-interface module or modules. **(Peters: "Relay units may be configured to do any of these "wake ups" and to alter their alarm time intervals. This allows given periods for daily data dumps from monitoring units to the host interface 200 via the relay unit 240 and/or host interface 200 queries to monitoring units via the relay unit 240, both at any time interval. Preferably, the default setting for the relay unit 240 is to commence data dumps to the host interface at twelve (12) AM (midnight) each day and to wake up and await for host interface queries every 30 minutes for 2 minutes." Col. 10, lines 30-39)**

Dwinnell, Schultz, Huhn, and Peters are combinable for the same rationale as set forth above with respect to claim 2.

10. Claim 3 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent No. 5,149,443 (Varnam).

Claim 3:

Dwinnell, Schultz, and Huhn do not explicitly describe oil/water sensors as described below. However, Varnam teaches the oil/water sensors as described below.

Dwinnell, Schultz, Huhn, and Peters describe the system of claim 1,

- wherein the sensors include a level sensor of an oil/water separation tank at one of the facilities configured to indicate a level at which oil meets water, and **(Varnam: "Also mounted on the floating arms 50 and 52 is at least one acoustical type oil layer thickness sensor 158. Sensor 158 acts to sense and determine the thickness of the oil layer lying within the defined oil collection area 54." Col. 6, lines 4-8)**
- wherein the datastore includes a record associating the tank with the facility. **(see the tanks in Varnam and the association of ventures to wells in Dwinnell; Varnam: see the tanks 200 as illustrated in figure 1; Dwinnell: see the ventures (i.e., facility) and the associated wells (i.e., equipment) as illustrated in figure 6A and as described in paragraph 0067)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Varnam, namely, an oil recovery system with an oil/water sensor, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the

teachings of Varnam to use an oil/water sensor would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring using various sensors and control of oil wells using actuator addressing of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of using an oil/water sensor in Varnam).

11. Claim 4 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent No. 7,967,066 (McStay).

Claim 4:

Dwinnell, Schultz, and Huhn do not explicitly describe a leak detector as described below. However, McStay teaches the leak detector as described below.

Dwinnell, Schultz, Huhn, and McStay describe the system of claim 1,

- wherein the sensors include a leak detector at one of the facilities, and **(McStay: see the leak detection sensors 320 as illustrated in figure 3)**
- wherein the datastore includes a record associating the leak detector with the facility. **(see the leak detector in McStay and the association of ventures to wells in Dwinnell;**

McStay: see the leak detection sensors 320 as illustrated in figure 3; Dwinnell: see the ventures (i.e., facility) and the associated wells (i.e., equipment) as illustrated in figure 6A and as described in paragraph 0067)

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of McStay, namely, leak detection in an oil well, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of McStay to use a leak detection sensor in an oil well would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring using various sensors and control of oil wells using actuator addressing of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of using a leak detector in an oil well in McStay).

12. Claims 6 and 15 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of

U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent Publication No. 2002/0156837 (Batke).

Claim 6:

Dwinnell, Schultz, and Huhn do not explicitly describe two ports as described below. However, Batke teaches the two ports as described below.

Dwinnell, Schultz, Huhn, and Batke describe the system of claim 5, wherein:

- the web server communicates with user devices via a first network port of a computing device executing the web server; and **(Batke: see the web server communication by the web access interface 30 via the internet interface 32 (i.e., first network port) as illustrated in figure 1 and as described in paragraph 0020; "Referring to FIG. 1, a new industrial control system 100 used to control an industrial process includes a web access interface 30 that is coupled to one or more control devices, which are shown as control devices 110, 120, 130 and 140. The web access interface 30 is capable of communications with one or more remote computer terminals or other remote devices 10 by way of the Internet or World Wide Web (or simply the "web") by way of an Internet interface 32. The web access interface 30 is also coupled to the control devices 110-140 by way of a control network interface 62 having one or more ports, which in this exemplary embodiment are shown to include a first port**

60 and a second port 70. Communication links 80 in turn couple the network interface 62 with the control devices 110-140." Paragraph 0020)

- the site server communicates with facilities via a second network port of the computing device, the second network port being different from the first network port. **(Batke: see the control device 110-140 communication by the web access interface 30 via the control network interface 62 (i.e., second network port) as illustrated in figure 1 and as described in paragraph 0020; "Referring to FIG. 1, a new industrial control system 100 used to control an industrial process includes a web access interface 30 that is coupled to one or more control devices, which are shown as control devices 110, 120, 130 and 140. The web access interface 30 is capable of communications with one or more remote computer terminals or other remote devices 10 by way of the Internet or World Wide Web (or simply the "web") by way of an Internet interface 32. The web access interface 30 is also coupled to the control devices 110-140 by way of a control network interface 62 having one or more ports, which in this exemplary embodiment are shown to include a first port 60 and a second port 70. Communication links 80 in turn couple the network interface 62 with the control devices 110-140." Paragraph 0020)**

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Batke, namely, a process control system with a web server, would

have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Batke to have various network configurations for the control device in the control system would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing and various ports for communication of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of multiple ports for communication within the process control system in Batke).

Claim 15:

Dwinnell, Schultz, and Huhn do not explicitly describe a private network as described below. However, Batke teaches the private network as described below.

Dwinnell, Schultz, Huhn, and Batke describe the system of claim 12, wherein the controller is communicatively coupled to the actuator or sensor via a private local area network. **(Batke: see the communication links 80 between the web access interface 30 and the control devices 110-140 as illustrated in figure 1 and as described in paragraphs 0020, 0029, 0031; "The communication links 80 can be wire cable, fiber optic or wireless, and are typically a proprietary or specialized network suitable for industrial control." Paragraph 0020)**

Dwinnell, Schultz, Huhn, and Batke are combinable for the same rationale as set forth above with respect to claim 6.

13. Claims 13-14 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent Publication No. 2005/0084988 (Huang).

Claim 13:

Dwinnell, Schultz, and Huhn do not explicitly describe threads as described below. However, Huang teaches the threads as described below.

Dwinnell, Schultz, Huhn, and Huang describe the system of claim 12, comprising at least four of the following as distinct threads from one another:

- a thread configured to sends and receive data requests; **(Huang: see the trace data collection tread receiving start/stop triggered by events from the machine control thread and sending trace data to the trace data store as illustrated in figure 5; "For the status data path 506, an independently executing thread obtains all sensor and/or actuator data from the various I/O module controllers to be passed along to user interface module 508 for display." Paragraph 0075)**

- a thread configured to synchronize other threads with updated information; **(Huang: see the trace data report thread updating the status data collection thread with data from the trace data store and the event driven data as illustrated in figure 5 and as described in paragraph 0076)**
- a thread configured to set a target state of actuators; **(Huang: see the machine control thread as illustrated in figure 5; "In one embodiment, the execution thread for collecting the trace data may have a higher priority even than the control thread that controls the actuators (which is also shown in FIG. 5)." Paragraph 0076)**
- a thread configured to obtain updated sensor readings; **(Huang: see the status data collection thread as illustrated in figure 5; "For the status data path 506, an independently executing thread obtains all sensor and/or actuator data from the various I/O module controllers to be passed along to user interface module 508 for display." Paragraph 0075)**
- a thread configured to process user interactions; and
- a thread that eliminates other threads upon detecting a problem with the eliminated threads.

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Huang, namely, using various threads in a process control system, would have yielded predictable results and resulted in an improved system. Accordingly,

applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Huang to use various threads in a process control system would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing and various threads for control of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of using various threads for control in a process control system in Huang).

Claim 14:

Dwinnell, Schultz, and Huhn do not explicitly describe threads as described below. However, Huang teaches the threads as described below.

Dwinnell, Schultz, Huhn, and Huang describe the system of claim 12, comprising at least two of the following as distinct threads from one another:

- a thread configured to sends or receive data request; **(Huang: see the trace data collection tread receiving start/stop triggered by events from the machine control thread and sending trace data to the trace data store as illustrated in figure 5; "For the status data path 506, an independently executing thread obtains all sensor and/or actuator data from the various I/O module controllers to be passed along to user interface module 508 for display." Paragraph 0075)**

- a thread configured to synchronize other threads with updated information; **(Huang: see the trace data report thread updating the status data collection thread with data from the trace data store and the event driven data as illustrated in figure 5 and as described in paragraph 0076)**
- a thread configured to set a target state of actuators; **(Huang: see the machine control thread as illustrated in figure 5; "In one embodiment, the execution thread for collecting the trace data may have a higher priority even than the control thread that controls the actuators (which is also shown in FIG. 5)." Paragraph 0076)**
- a thread configured to obtain updated sensor readings; **(Huang: see the status data collection thread as illustrated in figure 5; "For the status data path 506, an independently executing thread obtains all sensor and/or actuator data from the various I/O module controllers to be passed along to user interface module 508 for display." Paragraph 0075)**
- a thread configured to process user interactions; and
- a thread that eliminates other threads upon detecting a problem with the eliminated threads.

Dwinnell, Schultz, Huhn, and Haung are combinable for the same rationale as set forth above with respect to claim 13.

14. Claim 16 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent Publication No. 2011/0051645 (Hong).

Claim 16:

Dwinnell, Schultz, and Huhn do not explicitly describe checking validity as described below. However, Hong teaches the checking validity as described below.

Dwinnell, Schultz, Huhn, and Hong describe the system of claim 12, wherein controller is communicatively coupled to the actuator or sensor via a frame-based carrier-sense multiple access protocol with collision detection. **(see the controller in Dwinnell and the CSMA communication in Hong; Hong: "The node sensed collision and the nodes transmitted signals to the node sensed collision transmit data packets using a Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA) technique, which uses RTS/CTS for avoiding collision. Therefore, the nodes transmitted the signals check if the signals they transmitted collide in the upper node through a signal overhearing period. When a collision signal is detected, the nodes perform a channel allocation operation using the RTS/CTS packet in the data transmission period." Paragraph 0083; Dwinnell: "The remote site system 101 comprises a remote site video and data capture server 202 (hereinafter referred to as a**

remote site capture server 202 or "RSCS 202") in electronic communication with a plurality of cameras 205 positioned strategically about the remote site." Paragraph 0039)

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control system, with the teachings of Hong ,namely, using various communication techniques in a sensor network, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of using various communication techniques in a sensor network to Hong would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing and various communication techniques of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of using CSMA by sensors in Hong).

15. Claim 22 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0161685 (Dwinnell) in view of U.S. Patent

Publication No. 2002/0018399 (Schultz) and further in view of U.S. Patent Publication No. 2003/0052180 (Huhn) and U.S. Patent No. 4,052,703 (Collins).

Claim 22:

Dwinnell, Schultz, and Huhn do not explicitly describe checking validity as described below. However, Collins teaches the checking validity as described below.

Dwinnell, Schultz, Huhn, and Collins describe the system of claim 12, comprising: means for checking validity of a command. (**Collins: "A further object of the invention is to provide a control system capable of determining the validity of a message received over a cable without having to re-transmit the message to the remote control station." Col. 3, lines 65-68; "In this case, the answer being "no", another diamond 106 asks the question whether or not the instruction is a valid command for operation in the automatic mode. If the answer is "yes", the instruction signal is sent to block 107. The tests required in the various diamond or test functions employed in the logic control system of the present invention may be performed using a data masking technique or a "rotate right" technique or any other logical operation for determining the content or validity of a logical signal." Col. 11, lines 21-30**)

One of ordinary skill in the art would have recognized that applying the known technique of Dwinnell, namely, a web based interface for oil and gas drilling location information, the known techniques of Schultz, namely, a web server based interface for oil well information and control, and the teachings of Huhn, namely, using addresses to control actuators in a process control

system, with the teachings of Collins, namely, validating commands for an oil well system, would have yielded predictable results and resulted in an improved system. Accordingly, applying the teachings of Dwinnell to provide a web interface for remote viewing of information about oil wells, the teachings of Schultz to use a web interface to view information and control devices in oil wells, and the teachings of Huhn to control actuators using addresses with the teachings of Collins to validate commands for devices within an oil well would have been recognized by those of ordinary skill in the art as resulting in an improved monitoring and control system (i.e., remote monitoring and control of oil wells using actuator addressing and validation of control of Dwinnell based on the teachings of remote control of oil wells in Schultz, the teachings of controlling actuators using addressing in Huhn, and the teachings of validating control instructions for underwater oil installations in Collins).

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 on Monday through Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Lo can be reached on 571-272-9774. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher E. Everett/
Primary Examiner, Art Unit 2121

Notice of References Cited	Application/Control No. 14/984,422	Applicant(s)/Patent Under Reexamination PHILLIPS, AARON	
	Examiner Christopher E. Everett	Art Unit 2121	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-4,052,703 A	10-1977	Collins, Sr.; Jerry Alan	E21B33/0355	166/351
*	B	US-5,149,443 A	09-1992	Varnam; O'Neal	E02B15/046	210/104
*	C	US-2002/0018399 A1	02-2002	Schultz, Roger L.	G01V11/002	367/81
*	D	US-2002/0161685 A1	10-2002	Dwinnell, Michael	G06Q40/06	705/36R
*	E	US-2002/0156837 A1	10-2002	Batke, Brian A.	H04L69/162	709/203
*	F	US-2003/0052180 A1	03-2003	Huhn, Scott G.	G05B19/042	236/49.3
*	G	US-2005/0084988 A1	04-2005	Huang, Chung-Ho	H01J37/32935	438/9
*	H	US-6,967,589 B1	11-2005	Peters; George W.	E21B47/00	166/250.15
*	I	US-2011/0051645 A1	03-2011	HONG; Seung Ki	H04L45/48	370/311
*	J	US-7,967,066 B2	06-2011	McStay; Daniel	E21B33/035	166/250.01
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

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

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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

BIB DATA SHEET

CONFIRMATION NO. 1094

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
14/984,422	12/30/2015	700	2121	034392-0444743

APPLICANTS
AmpliSine Labs, LLC., Lubbock, TX;

INVENTORS
Aaron Phillips, Lubbock, TX;

**** CONTINUING DATA **************************
This application is a CON of 14/147,190 01/03/2014 PAT 9342078
which is a CON of 13/708,557 12/07/2012 PAT 8649909

**** FOREIGN APPLICATIONS **************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
01/13/2016

Foreign Priority claimed	☐ Yes ☑ No	☐ Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
35 USC 119(a-d) conditions met	☐ Yes ☑ No		TX	3	23	1
Verified and Acknowledged	/CHRISTOPHER E EVERETT/ Examiner's Signature	Initials				

ADDRESS

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

TITLE

REMOTE CONTROL OF FLUID-HANDLING DEVICES

FILING FEE RECEIVED		
850	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	Art Unit
	CHRISTOPHER E EVERETT	2121

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

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

CLAIM		DATE								
Final	Original	12/09/2016								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								
	21	✓								
	22	✓								
	23	✓								

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	54	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$ or US-20080077512-$ or US-20030052180-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$ or US-5805926-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/09 11:51
L3	2	2 and thread	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:51
L4	2	2 and (leak adj4 sensor)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:51
L5	8	2 and (private)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
L6	6	2 and (carrier)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
L7	2	2 and (validity)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 11:52
L8	1	("20020156837").PN.	US-PGPUB; USPAT; FPRS;	OR	OFF	2016/12/09 12:11

			EPO			
L9	1	("6799195").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:15
L10	2	("20110051645").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:34
L11	3	("5546301").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 12:55
L12	127	("5247447" | "5272642" | "5353229").PN. OR ("5546301").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/09 12:55
L13	21	12 and thread	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 12:55
L14	38793	(thread near4 (actuator sensor gui synchronize data))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
L15	6873	(thread near4 (actuator sensor gui synchronize data)).ab.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
L16	6416	(thread near4 (actuator sensor gui synchronize data)).clm.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
L17	38793	14 15 16	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:00
L18	11652	15 16	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
L19	625	17 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
L20	157	18 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:01
L21	0	(thread near4 (actuator and sensor and synchronize and	US-	OR	ON	2016/12/09

		data))	PGPUB; USPAT; FPRS; EPO			13:02
L22	144	(thread near4 (actuator and sensor))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:02
L23	10	22 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/09 13:02
S1	11	("20020161685" | "20020169645" | "20030004624" | "20030182463" | "20040088115" | "20040231851" | "20050108504" | "20060240818" | "20080208475" | "20100295673" | "20120316658").PN.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/22 08:35
S2	34	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/22 08:35
S3	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:35
S4	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:36
S5	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/02/22 08:39
S6	1	("20060149476").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:39
S7	1	("20060271299").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S8	1	("20030065447").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S9	1	("4594665").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:40
S10	1	("20050092523").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:42
S11	1	("20060047527").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 08:42
S12	53	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11	US-PGPUB; USPAT; EPO	OR	ON	2013/02/22 08:54
S13	17	(US-20090260829-$ or US-20020112860-$ or US-20040262008-$ or US-20070107903-$ or US-20040251030-$).did. or (US-7000693-$ or US-6420976-$ or US-7967066-$ or US-RE41173-$ or US-7148812-$ or	EPO; JPO; DERWENT	OR	ON	2013/02/22 09:01

		US-6768700-$ or US-7845404-$ or US-6913083-$ or US-4636934-$ or US-5732776-$ or US-4052703-$ or US-7958938-$ or US-4755943-$).did.				
S14	1	("7261162").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:05
S15	62	("5331318" | "5597042" | "5662165" | "5706892" | "5706896" | "5721538" | "5730219" | "5732776" | "5803167" | "5868201" | "5934371" | "5941307" | "5959547" | "5975204" | "5992250" | "6006832" | "6012015" | "6046685" | "6068053" | "6075462" | "6125938" | "6160492" | "6161618" | "6176312" | "6179057" | "6192980" | "6192988" | "6209640" | "6247536" | "6257332" | "6271766" | "6276454" | "6279660" | "6281489" | "6288975" | "6296066" | "6422315" | "6469636" | "6498988" | "6622799" | "6670880" | "6717501" | "6788980" | "6801135" | "6816082" | "6851444").PN. OR ("7261162").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/22 09:05
S16	1	("20040262008").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:05
S17	1	("7148812").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S18	1	("7958938").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S19	1	("7967066").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S20	1	("7845404").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:08
S21	1	("6913083").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:09
S22	1	("20020112860").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:09
S23	1	("5732776").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:10
S24	1	("4052703").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/02/22 09:11
S25	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:50

		or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.				
S26	0	S25 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:50
S27	7	S25 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:51
S28	4518	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:52
S29	2295	S28 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:53
S30	839	S29 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:53
S31	239	S30 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:54
S32	2	S31 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/25 15:54
S33	4284	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S34	5841	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S35	18470	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S36	767	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:07
S37	463	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08
S38	29579	S33 S34 S35 S36 S37	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08
S39	168445	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:08
S40	2119066	(controller control device) near2 (operate operat$4 adjust	US-	OR	ON	2013/02/26

		drive move close)	PGPUB; USPAT; EPO			10:10
S41	1404	S38 and S39	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:10
S42	1837654	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:11
S43	579	S41 and (internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:11
S44	15604	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S45	642	S40 and S41	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S46	315	S45 and S42	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S47	337	S39 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S48	6	S46 and S47	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:12
S49	2	("2010/0147510").URPN.	USPAT	OR	ON	2013/02/26 10:13
S50	62	("5331318" | "5597042" | "5662165" | "5706892" | "5706896" | "5721538" | "5730219" | "5732776" | "5803167" | "5868201" | "5934371" | "5941307" | "5959547" | "5975204" | "5992250" | "6006832" | "6012015" | "6046685" | "6068053" | "6075462" | "6125938" | "6160492" | "6161618" | "6176312" | "6179057" | "6192980" | "6192988" | "6209640" | "6247536" | "6257332" | "6271766" | "6276454" | "6279660" | "6281489" | "6288975" | "6296066" | "6422315" | "6469636" | "6498988" | "6622799" | "6670880" | "6717501" | "6788980" | "6801135" | "6816082" | "6851444").PN. OR ("7261162").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/26 10:14
S51	11	("5941305" | "5959547" | "5978749" | "6061603" | "6670880").PN. OR ("6801135").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/26 10:18
S52	10	S39 and S44 and S38	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:21
S53	337	S39 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:22

S54	203	S53 and (internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:22
S55	387	(local autonomous independent) and S45	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:25
S56	381	S55 not S54	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:25
S57	501662	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:28
S58	8886	S57 and S39	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:29
S59	106	S58 and S44	US-PGPUB; USPAT; EPO	OR	ON	2013/02/26 10:29
S60	44	("20030004624" | "20040088115" | "20100147510" | "5732776" | "7931090" | "7967066" | "8312320" | "20130144531" | "8301386" | "20050108504" | "20100295673" | "20110231024" | "6061603" | "8386059" | "20100098507" | "20030182463" | "4052703" | "6192980" | "7958938" | "8373418" | "20130024026" | "20040231851" | "20060240818" | "7148812" | "7289994" | "20120316658" | "20040262008" | "7921916" | "8131510" | "8290737" | "20100326654" | "20020161685" | "20090149969" | "7845404" | "8179279" | "20020112860" | "20050096846" | "5149443" | "6801135" | "6913083" | "20130008645" | "20020169645" | "20080208475" | "7591308").PN.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/11 13:22
S61	37	(US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020161685-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6801135-$ or US-6061603-$ or US-6192980-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:58
S62	0	S61 and oscillate	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:58
S63	1	S61 and (stuck adj3 valve)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 07:59

S64	4400	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S65	5969	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S66	19220	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S67	804	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S68	475	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S69	30612	S64 S65 S66 S67 S68	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S70	172242	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S71	241	S69 and S70 and "240"	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:10
S72	2175607	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S73	664	S69 and S70 and S72	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S74	6	S73 and (inoperative in-operative stuck) adj3 (valve part)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:11
S75	94	S70 and (stuck) adj3 (valve)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:14
S76	94	S70 and ((stuck) adj3 (valve))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:14
S77	109	S70 and ((frozen froze stuck) adj3 (valve))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:19
S78	12	((move jerk oscillate move) near2 ((frozen froze stuck) adj3 (valve)))	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 08:21

S79	1	("4823749").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/06/12 08:22
S80	1	("20010032518").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/06/12 10:53
S81	35	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/12 11:14
S82	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S83	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S84	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/06/12 11:14
S85	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S86	0	S85 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S87	7	S85 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S88	4795	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S89	2432	S88 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S90	889	S89 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S91	246	S90 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S92	2	S91 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S93	1458	S69 and S70	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S94	1900176	(internet network (web adj2 server))	US-	OR	ON	2013/06/12

			PGPUB; USPAT; EPO			11:14
S95	16083	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S96	664	S72 and S93	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S97	327	S96 and S94	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S98	343	S70 and S95	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S99	6	S97 and S98	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S100	10	S70 and S95 and S69	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S101	528886	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S102	9459	S101 and S70	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S103	110	S102 and S95	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S104	158	S81 S82 S83 S84 S86 S87 S92 S99 S100 S103	US-PGPUB; USPAT; EPO	OR	ON	2013/06/12 11:14
S105	16	("2004/0262008").URPN.	USPAT	OR	ON	2013/10/25 12:32
S106	9	("20040262008" | "20050035875" | "4701756" | "5959547" | "6229453" | "6816082").PN. OR ("7148812").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/25 12:39
S107	1	("5959547").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2013/10/25 12:45
S108	4578	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S109	6150	702/6,13,183,188.ccls.	US-PGPUB; USPAT;	OR	ON	2013/10/25 12:46

			EPO			
S110	20349	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S111	850	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S112	486	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S113	32148	S108 S109 S110 S111 S112	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S114	177528	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S115	2253717	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S116	36	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/25 12:46
S117	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S118	0	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S119	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2013/10/25 12:46
S120	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S121	0	S120 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S122	7	S120 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S123	4935	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S124	2501	S123 and pump	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46

S125	917	S124 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S126	257	S125 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S127	2	S126 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S128	1540	S113 and S114	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S129	1987225	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S130	16785	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S131	707	S115 and S128	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S132	351	S131 and S129	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S133	357	S114 and S130	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S134	6	S132 and S133	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S135	10	S114 and S130 and S113	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S136	553323	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S137	9948	S136 and S114	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S138	117	S137 and S130	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S139	166	S116 S117 S118 S119 S121 S122 S127 S134 S135 S138	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46

S140	166	S139	US-PGPUB; USPAT; EPO	OR	ON	2013/10/25 12:46
S144	4914	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S145	6494	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S146	22712	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S147	948	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S148	511	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S149	35297	S144 S145 S146 S147 S148	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S150	188122	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S151	2416039	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S152	38	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/07/22 16:19
S153	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19
S154	2	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19
S155	5	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2014/07/22 16:19
S156	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S157	0	S156 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S158	7	S156 and (oil near2 water)	US-	OR	ON	2014/07/22

			PGPUB; USPAT; EPO			16:19
S159	5262	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S160	2663	S159 and pump	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S161	969	S160 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S162	268	S161 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S163	4	S162 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S164	1686	S149 and S150	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S165	2171012	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S166	18312	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S167	776	S151 and S164	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S168	390	S167 and S165	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S169	383	S150 and S166	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S170	8	S168 and S169	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S171	12	S150 and S166 and S149	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S172	605853	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S173	10936	S172 and S150	US-	OR	ON	2014/07/22

			PGPUB; USPAT; EPO			16:19
S174	129	S173 and S166	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S175	178	S152 S153 S154 S155 S157 S158 S163 S170 S171 S174	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S176	178	S175	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S177	178	S176	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:19
S178	2489	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:20
S179	645	S178 and S150	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S180	452	S179 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S182	15	S180 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:28
S183	16	S178 and S166 and S165	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:29
S184	204	S182 S183 S177	US-PGPUB; USPAT; EPO	OR	ON	2014/07/22 16:29
S185	23	("4007450" | "4888726" | "5560005" | "5724575" | "5828851" | "5838563" | "5845230" | "5956483" | "6000045" | "6131120" | "6263487" | "6701437" | "6799077").PN. OR ("7289994").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/23 16:41
S186	1	("20090055029").PN.	US-PGPUB; USPAT; EPO	OR	OFF	2015/03/06 14:23
S187	46	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$).did. or (US-	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 14:45

		7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6801135-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.				
S188	2	S187 and pid	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 14:45
S189	5307	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S190	6733	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S191	24915	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S192	1044	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S193	530	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S194	38241	S189 S190 S191 S192 S193	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S195	197343	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S196	2561451	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S197	39	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2015/03/06 16:10
S198	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2015/03/06 16:10
S199	2	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2015/03/06 16:10
S200	6	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2015/03/06 16:10
S201	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10

		20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.				
S202	0	S201 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S203	7	S201 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S204	5538	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S205	2804	S204 and pump	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S206	1031	S205 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S207	287	S206 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S208	4	S207 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S209	1822	S194 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S210	2334181	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S211	19758	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S212	846	S196 and S209	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S213	432	S212 and S210	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S214	411	S195 and S211	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S215	10	S213 and S214	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10

S216	17	S195 and S211 and S194	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S217	652812	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S218	11860	S217 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S219	139	S218 and S211	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S220	192	S197 S198 S199 S200 S202 S203 S208 S215 S216 S219	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S221	192	S220	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S222	192	S221	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S223	2737	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S224	706	S223 and S195	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S225	492	S224 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S226	16	S225 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S227	16	S223 and S211 and S210	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S228	219	S226 S227 S222	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S229	219	S228	US-PGPUB; USPAT; EPO	OR	ON	2015/03/06 16:10
S230	5577	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46

S231	6864	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S232	25873	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S233	1107	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S234	547	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S235	39674	S230 S231 S232 S233 S234	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S236	205047	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S237	2685982	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S238	43	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2015/09/21 08:46
S239	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S240	3	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S241	6	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2015/09/21 08:46
S242	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S243	0	S242 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S244	7	S242 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S245	5794	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S246	2926	S245 and pump	US-	OR	ON	2015/09/21

			PGPUB; USPAT; EPO			08:46
S247	1087	S246 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S248	297	S247 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S249	4	S248 and ("700"/$.ccls. "702"/$.ccls.)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S250	1898	S235 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S251	2471267	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S252	21038	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S253	891	S237 and S250	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S254	452	S253 and S251	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S255	430	S236 and S252	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S256	10	S254 and S255	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S257	17	S236 and S252 and S235	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S258	692562	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S259	12566	S258 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S260	153	S259 and S252	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S261	210	S238 S239 S240 S241 S243 S244 S249 S256 S257 S260	US-	OR	ON	2015/09/21

			PGPUB; USPAT; EPO			08:46
S262	210	S261	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S263	210	S262	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S264	2965	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S265	752	S264 and S236	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S266	523	S265 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S267	16	S266 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S268	18	S264 and S252 and S251	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S269	239	S267 S268 S263	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S270	239	S269	US-PGPUB; USPAT; EPO	OR	ON	2015/09/21 08:46
S271	239	S270	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2015/09/21 08:46
S276	6137	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S277	7043	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S278	26619	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S279	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13

S280	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S281	41214	S276 S277 S278 S279 S280	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S282	223345	(oil hydrocarbon (hydro adj2 carbon) gas) near2 (well site disposal station)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S283	2986529	(controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S284	60	((AARON) near2 (PHILLIPS)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:13
S285	5	((AARON) near2 (PHILLIPS)).INV.	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S286	7	(AMPLISINE adj2 LABS).as.	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S287	7	real-time and onsite and internet and communication	EPO; JPO; DERWENT	OR	ON	2016/12/07 16:13
S288	20	(US-20040262008-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S289	0	S288 and (oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S290	7	S288 and (oil near2 water)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S291	6407	(oil near2 water near2 separation)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S292	3258	S291 and pump	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S293	1220	S292 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S294	338	S293 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S295	6	S294 and ("700"/$.ccls. "702"/$.ccls.)	US-	OR	ON	2016/12/07

			PGPUB; USPAT; EPO			16:13
S296	2046	S281 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S297	2802086	(internet network (web adj2 server))	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S298	24197	(local autonomous independent) near2 (controller control device) near2 (operate operat$4 adjust drive move close)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S299	976	S283 and S296	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S300	511	S299 and S297	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S301	499	S282 and S298	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S302	15	S300 and S301	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S303	22	S282 and S298 and S281	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S304	788452	(remote internet network) near2 (control monitor control$4 monitor$4 command)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S305	14396	S304 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S306	185	S305 and S298	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S307	262	S284 S285 S286 S287 S289 S290 S295 S302 S303 S306	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S308	262	S307	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S309	262	S308	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S310	3692	G05D7/0676;G05B9/02;E21B47/00;G05B2219/23472.cpc.	US-	OR	ON	2016/12/07

			PGPUB; USPAT; EPO			16:13
S311	1005	S310 and S282	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S312	680	S311 and (oil near2 well)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S313	20	S312 and (oil near2 level)	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S314	22	S310 and S298 and S297	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S315	293	S313 S314 S309	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S316	293	S315	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13
S317	293	S316	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S318	293	S317	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S319	81003	(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).cpc.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:13
S320	46	(US-20040262008-$ or US-20020161685-$ or US-20090055029-$ or US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$).did. or (US-7289994-$ or US-6801135-$ or US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:13

S321	4	S320 and (network adj2 (address addresses))	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:19
S322	2	("20020018399").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:26
S323	13	("5941305" | "5959547" | "5978749" | "6061603" | "6670880").PN. OR ("6801135").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:27
S324	47	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/07 16:28
S325	29	S324 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:28
S326	12	S325 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:29
S327	2	("7096092").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:29
S328	1	("6967589").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:31
S329	91	("5438329" | "5717718" | "5963650" | "6062095" | "6169488" | "6305471" | "6356205" | "6369715" | "6574652" | "6693553" | "6795319").PN. OR ("6967589").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/12/07 16:32
S330	47	S329 and (cell cellular wireless)	US-PGPUB; USPAT; FPRS;	OR	ON	2016/12/07 16:33

			EPO			
S331	23	S330 and (web html)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/07 16:33
S332	2	("20090055029").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:34
S333	2	("20100033318").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/07 16:35
S334	51	(US-20120316658-$ or US-20080208475-$ or US-20060271299-$ or US-20060240818-$ or US-20050092523-$ or US-20040231851-$ or US-20040088115-$ or US-20030182463-$ or US-20020169645-$ or US-20040262008-$ or US-20020112860-$ or US-20090149969-$ or US-20100147510-$ or US-20050096846-$ or US-20110231024-$ or US-20020161685-$ or US-20120310582-$ or US-20010032518-$ or US-20140163749-$ or US-20090055029-$ or US-20020018399-$ or US-20100033318-$).did. or (US-7148812-$ or US-7958938-$ or US-7967066-$ or US-7845404-$ or US-6913083-$ or US-5732776-$ or US-4052703-$ or US-8179279-$ or US-5149443-$ or US-8386059-$ or US-8131510-$ or US-7289994-$ or US-8373418-$ or US-8312320-$ or US-8290737-$ or US-7931090-$ or US-7921916-$ or US-6061603-$ or US-6192980-$ or US-6435022-$ or US-4823749-$ or US-8208478-$ or US-7347271-$ or US-5959547-$ or US-5941305-$ or US-7096092-$).did. or (US-6967589-$ or US-6356205-$).did. or (WO-2008124765-$).did.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 12:05
S335	20	S334 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 12:05
S336	13	S335 and (address addresses)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 12:22
S337	48	(US-20120029661-$ or US-20080077512-$ or US-20100179669-$ or US-20040125141-$ or US-20040075689-$ or US-20040064205-$ or US-20120041570-$ or US-20050027377-$ or US-20050027376-$ or US-20110173556-$ or US-20080208380-$ or US-20070179641-$ or US-20050120288-$ or US-20040186927-$ or US-20030233438-$ or US-20030225650-$ or US-20030107591-$ or US-20090327942-$ or US-20080189638-$ or US-20080125877-$ or US-20080065706-$ or US-20080065705-$ or US-20080034047-$ or US-20070239291-$).did. or (US-6931288-$ or US-7515977-$ or US-8677262-$ or US-8533619-$ or US-8356257-$ or US-7680546-$ or US-7526794-$ or US-6889096-$ or US-8516383-$ or US-7971151-$ or US-7783370-$ or US-7729792-$ or US-	US-PGPUB; USPAT	OR	ON	2016/12/08 12:28

		7526347-$ or US-7152072-$ or US-7117052-$ or US-7043311-$ or US-6834370-$ or US-6735596-$ or US-6442512-$ or US-6434500-$ or US-5631825-$ or US-6445963-$ or US-6522934-$ or US-6247020-$).did.				
S338	24	S337 and (address addresses)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:31
S339	17	S337 and (cell cellular)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:31
S340	13	S338 and S339	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:32
S341	2230	(web html) near4 (control controlling) near4 (actuator controller valve)	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:48
S342	6137	700/1,282,275,281,42.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S343	7043	702/6,13,183,188.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S344	26619	709/224.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S345	1160	166/336,363,250.1.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S346	554	340/853.3,853.2,856.3.ccls.	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S347	41214	S342 S343 S344 S345 S346	US-PGPUB; USPAT; EPO	OR	ON	2016/12/08 13:48
S348	81068	(G05D7/0676 or H04L67/02 or G05B19/0428 or G06F3/0484 or E21B47/00 or G05B9/02 or G05B2219/24015 or G05B2219/25204 or G05B2219/31369 or G05B2219/23472).cpc.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:48
S349	120388	S348 S347	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:48
S350	155	S341 and 700/$.ccls.	US-PGPUB; USPAT;	OR	ON	2016/12/08 13:49

			FPRS; EPO			
S351	145	S349 and S341	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:53
S352	387	((web html) near4 (control controlling) near4 (actuator controller valve)).ab.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:53
S353	20	S349 and S352	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S354	19	S352 and 700/$.ccls.	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S355	34	S353 S354	US-PGPUB; USPAT; FPRS; EPO	OR	ON	2016/12/08 13:54
S356	2	("20020018399").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/08 14:01
S357	1	("5805926").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 08:48
S358	2	("20030052180").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 08:55
S359	1	("6967589").PN.	US-PGPUB; USPAT; FPRS; EPO	OR	OFF	2016/12/09 10:24

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S141	0	(translating plurality commands translated commands encoded plurality protocols different from the first protocol each translated command being translated into a protocol among the plurality of protocols suitable for a fluid handling device to which the respective command is directed the at least some of the translated command being operative to cause a local controller of the given fluid-handling device to	US-PGPUB; USPAT	AND	ON	2013/10/25 13:15

		drive the given fluid-handling device to the plurality of different target states the local controller being responsive to the translated commands and feedback from the given fluid handling device indicative of whether the given fluid handling device is in a targeted state).clm.				
S142	0	(translating plurality commands translated commands encoded plurality protocols different from the first protocol each translated command being translated into a protocol among the plurality of protocols suitable for a fluid handling device to which the respective command is directed the at least some of the translated command being operative to cause a local controller of the given fluid-handling device).clm.	US-PGPUB; USPAT	AND	ON	2013/10/25 13:16
S143	0	(sending the translated commands to respective local controllers of the respective fluid handling devices to which the respective commands are directed).clm.	US-PGPUB; USPAT	AND	ON	2013/10/25 13:16
S272	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions comprises after receiving the instructions determining a plurality of different target states of the at least one of the fluid handling devices, the plurality of different states each corresponding to different times after determining the plurality of different target states translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols the one or more translated instructions including the determined plurality of different target states).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51
S273	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions comprises after receiving the instructions determining a plurality of different target states of the at least one of the fluid handling devices).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51
S274	0	(obtaining a target state of at least one of the fluid handling devices based on at least some of the plurality of instructions wherein obtaining a target state).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51
S275	0	(the plurality of different states each corresponding to different times after determining the plurality of different target states translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols the one or more translated instructions including the determined plurality of different target states).clm.	US-PGPUB; USPAT	AND	ON	2015/09/21 08:51

12/ 9/ 2016 1:34:52 PM
C:\ Users\ ceverett\ Documents\ EAST\ Workspaces\ 14984422-RemoteControlOilGas.wsp

Google determine address for controlling actuator

All Shopping Videos News More Settings Tools

About 23,400,000 results (0.40 seconds)

Automatic procedure for locating actuator addresses on a bus system

www.google.com/patents/US6915171
Grant - Filed Apr 26, 2001 - Issued Jul 5, 2005 - Walter Mayer - Visteon Global Technologies, Inc.
Because their functions are different, the **control** system can **determine** which **actuator** is in which location, and thus locate the **address** for each ...
Overview · Related · Discuss

Disk drive determining frequency response of actuator near servo ...

www.google.com/patents/US8970979
Grant - Filed Dec 18, 2013 - Issued Mar 3, 2015 - Qing Wei Jia - Western Digital Technologies, Inc.
The second **control** signal u2(k) is applied to the **actuator** ... The frequency response of the **actuator** is **determined** at the ... The servo data field 12 stores coarse head positioning information, such as a servo track **address**, ...
Overview · Related · Discuss

Method for assigning an address to an actuator to be controlled via ...

www.google.com/patents/EP1291743A2?cl=en
App. - Filed Jun 10, 2002 - Published Mar 12, 2003 - Bertrand Dupont - Delphi Technologies, Inc.
wherein said **address** assigned to said **actuator** is **determined** on the ... said **actuator** to a **control** unit, in which said **address** of said **actuator** has ...
Overview · Related · Discuss

Method and apparatus for establishing addresses for plural actuators ...

www.google.com/patents/US20030052180
App. - Filed Sep 19, 2001 - Published Mar 20, 2003 - Scott Huhn - Trw Inc.
A method for establishing an **actuator address** in a system having plural ... **determining** at least one operating parameter of the mounted **actuator**; and ... An **actuator** for use in a HVAC system having plural fluid flow **control** ...
Overview · Related · Discuss

System and method for controlling actuators

www.google.com/patents/US8860352
Grant - Filed May 10, 2012 - Issued Oct 14, 2014 - Mouhacine Benosman - Mitsubishi Electric Research Laboratories, Inc.
A method controls an operation of an **actuator**. A first **control** signal is **determined** to change a position of a moving element of the **actuator** ...
Overview · Related · Discuss

Method and apparatus for controlling and determining the status of ...

www.google.com/patents/US5905442
Grant - Filed Feb 7, 1996 - Issued May 18, 1999 - Donald R. Mosebrook - Lutron Electronics Co., Inc.
A master **control** unit has at least one **actuator** and status indicator and a ... Method and apparatus for **controlling** and **determining** the status of ..... The method of claim 35, further comprising assigning an **address** to each of the ...
Overview · Related · Discuss

Method for detecting damage in the shift-control actuator of an ...



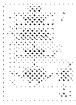
www.google.com/patents/US7890238
Grant - Filed Oct 22, 2005 - Issued Feb 15, 2011 - Markus Klump - Schaeffler Technologies Gmbh & Co. Kg
(b) moving the shift-**control** **actuator** up to a limit stop following engagement of the gear or another gear; **determining** whether the limit stop ...
Overview · Related · Discuss

Method for automatically assigning addresses to the participating ...



www.google.com/patents/US6775767
Grant - Filed Apr 18, 2001 - Issued Aug 10, 2004 - Knut Hinrichs - Elmos Semiconductor Ag
wherein the **control** device causes the **actuator** driving devices of the units ... **determining** the actual operating parameters of the **actuator** driving ...
Overview · Related · Discuss

Method and code for controlling actuator responsive to oil pressure ...



www.google.com/patents/US20060185426
App. - Filed Feb 24, 2005 - Published Aug 24, 2006 - Alan Falkowski - Falkowski Alan G
A method and code for **controlling** the operation of a deactivatable valve lifter of an internal combustion engine includes **determining** an oil ...
Overview · Related · Discuss

Digital actuator control and method



www.google.com/patents/WO2004063828A2?cl=en
App. - Filed Jan 6, 2004 - Published Jul 29, 2004 - John K. Rote - Texas Instruments Incorporated
The **actuator** voltage in an HDA is sampled and a velocity error (36, 56) is **determined**. ... and for outputting a digital voltage command for **controlling** the **actuator** motor. ... [004] In an attempt to **address** these problems, voice coil **actuators**, ... the **actuator** voltage to dynamically **determine** the **actuator** velocity.
Overview · Related · Discuss

Google identify network addresses of control equipment

All News Images Videos More Settings Tools

About 23,100,000 results (0.46 seconds)

Methods and systems for onboarding network equipment



www.google.com/patents/US20150373001

App. - Filed Jun 18, 2015 - Published Dec 24, 2015 - Dominik Schatzmann - Swisscom Ag

an onboarding **controller** for onboarding **network equipment** to a .... may only be able to **identify** themselves passively (e.g., by a MAC **address**), ...

Overview · Related · Discuss

Interworking policy and charging control and network address translator



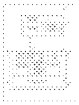
www.google.com/patents/US20080159313

App. - Filed Dec 12, 2007 - Published Jul 3, 2008 - Juha Rasanen - Nokia Corporation

allocating an **address** to a user **equipment** in said **network** for said ... an **identifying** unit configured to **identify** a function-specific relay for ...

Overview · Related · Discuss

System and methods for managing network protocol address assignmen...



www.google.com/patents/US8856384

Grant - Filed Oct 14, 2011 - Issued Oct 7, 2014 - Kanzhe Jiang - Big Switch Networks, Inc.

The **controller** may **determine** whether to modify Ethernet **addresses** or IP .... It is not uncommon for **networks** to include **equipment** from multiple ...

Overview · Related · Discuss

Mobile communication network, terminal equipment, packet ...



www.google.com/patents/US6973076

Grant - Filed May 15, 2001 - Issued Dec 6, 2005 - Yukiko Takeda - Hitachi, Ltd.

An IPv6 mobile packet communication **network** in which mobile VPN service can ... allowing said terminal **equipment** to send a **control** signal to said gateway via ... **network equipment**, said gateway sends a **control** signal including **address** ... wherein information to be used by said gateway for **identifying** a ...

Overview · Related · Discuss

System and methods for managing network hardware address requests ...



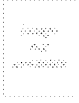
www.google.com/patents/WO2013052564A2?cl=en

App. - Filed Oct 4, 2012 - Published Apr 11, 2013 - Robert Edward ADAMS - Big Switch Networks, Inc.

A **controller** may fulfill hardware **address** requests that are sent by source end hosts ... The **controller** may use **network** topology information to **determine** how to ... This is because the switch **equipment** of one vendor may use a ...

Overview · Related · Discuss

Content node network address selection for content delivery



www.google.com/patents/WO2015047859A1?cl=en

App. - Filed Sep 18, 2014 - Published Apr 2, 2015 - Artur BERGMAN - Fastly, Inc.

The end user device can use the selected **network address** to reach the ... **Control** node 150 **identifies network** characteristics for end user device 130 ... 130 can be a user device, subscriber **equipment**, customer **equipment**, ...

Overview · Related · Discuss

Network Topology Management System, Management Apparatus, Mana...



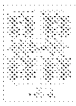
www.google.com/patents/US20090109875

App. - Filed Dec 4, 2008 - Published Apr 30, 2009 - Yasunori Kaneda - Hitachi, Ltd.

A **network** topology management system includes information ... access **control**) **addresses** or IP **addresses** are used to **identify equipments** in ...

Overview · Related · Discuss

Network topology management system, management apparatus, manag...



www.google.com/patents/US7469281

Grant - Filed Nov 20, 2002 - Issued Dec 23, 2008 - Yasunori Kaneda - Hitachi, Ltd.

The management device has a **control** section that manages the ... **control**) **addresses** or IP **addresses** are used to **identify equipments** in the ...

Overview · Related · Discuss

Network Device Location and Configuration



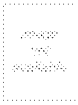
www.google.com/patents/US20080140815

App. - Filed Dec 12, 2006 - Published Jun 12, 2008 - Dmitry Brant - The Lincoln Electric Company

The broadcast message requests **identification** information from each device. ... assigning a **network address** to an un-mapped device that does not have ... communication and **control networks** that link processing **equipment** ...

Overview · Related · Discuss

System and method for automated and semiautomated configuration of ...



www.google.com/patents/WO2015160346A1?cl=en

App. - Filed Apr 16, 2014 - Published Oct 22, 2015 - Kraig RITMANICH - Abb Inc.

(viii) poll the **control network** for a device having the proposed device object .... disclosure concerns configuration of facility automation and **control equipment**. ... Such **address** conflicts can be time consuming to **identify** and fix.

Overview · Related · Discuss

Google process control carrier-sense multiple access protocol

All Images Videos Shopping More Settings Tools

About 156,000 results (0.48 seconds)

Method for practicing carrier sense multiple access at the ...



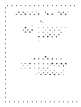
www.google.com/patents/US9107220

Grant - Filed Jan 16, 2013 - Issued Aug 11, 2015 - Matthew J. Sherman - Bae Systems Information And Electronic Systems Integration Inc.

The processed uplink state is then broadcast in a **control** packet on a ... a **carrier sense multiple access** (V-CSMA) **protocol** to **control** when the SS radio ... The cell manager **processes** the uplink state, in the application layer in ...

Overview · Related · Discuss

Carrier sense multiple access with collision avoidance utilizing ...



www.google.com/patents/US4628311

Grant - Filed Oct 19, 1983 - Issued Dec 9, 1986 - Philip E. Milling - International Business Machines Corporation

Carrier sense multiple access with collision avoidance utilizing rotating ... receiving said access **control** number at each other station desiring access .... access **protocol** for use in a local area network (LAN) of data **processing** ...

Overview · Related · Discuss

Carrier sense multiple access with collision avoidance utilizing ...



www.google.com/patents/CA1225714A1?cl=en

Grant - Filed Aug 20, 1984 - Issued Aug 18, 1987 - Philip E. Milling - Philip E. Milling

Carrier sense multiple access with collision avoidance utilizing rotating ... receiving said access **control** number at each other station desiring access .... access **protocol** for use in a local area net-work (LAN) of data **processing** ...

Overview · Related · Discuss

Method and apparatus for power level control in area networks



www.google.com/patents/US4816825

Grant - Filed Feb 27, 1987 - Issued Mar 28, 1989 - John K. Chan - Zenith Electronics Corporation

... employing a **carrier sense multiple access** with collision detection **protocol** an ... Generation of signal level **control** signals at the head-end of a two-way .... Alternatively, the routine can be performed as an iterative **process**.

Overview · Related · Discuss

Communication system operating according to the carrier sense ...



www.google.com/patents/WO2006109213A1?cl=en

App. - Filed Apr 4, 2006 - Published Oct 19, 2006 - Georgios Orfanos - Koninklijke Philips Electronics N.V.

The method of claim 1, implementing **Carrier Sense Multiple Access** as a ... The backoff **procedure** foresees that a station has to keep sensing the ..... a method of transmit backoff for a medium access **control protocol** in a ...

Overview · Related · Discuss

Hybrid implicit token carrier sensing multiple access/collision ...



www.google.com/patents/US20100027558

App. - Published Feb 4, 2010 - Tae Man Han - Tae Man Han

A hybrid implicit token **carrier sense multiple access**/collision avoidance ... access **controller**, wherein the contention based media access **protocol** ... The reservation **process** is a five-phase

procedure and takes a long time.
Overview · Related · Discuss

Access control system for wireless-lan terminals



www.google.com/patents/US5828663
Grant - Filed Dec 1, 1995 - Issued Oct 27, 1998 - Yoshikazu Ikegami - Nec Corp.
control means for performing a first transmission process control such that data ... a wired-LAN controller incorporating a carrier sense multiple access with .... Therefore, the CSMA/CD protocol may be applied to wireless LAN ...
Overview · Related · Discuss

Algorithms and protocols for optimizing carrier sense multiple ...



www.google.com/patents/EP1708382A1?cl=en
App. - Filed Sep 25, 2002 - Published Oct 4, 2006 - Peter Stanforth - Meshnetworks, Inc.
The system and method further control a node of the communication network ... for optimizing carrier sense multiple access (CSMA) protocols in wireless ..... In accordance with this process, no other terminal can use the radio ...
Overview · Related · Discuss

Hybrid implicit token carrier sensing multiple access/collision ...



www.google.com/patents/US20050135408
App. - Filed Aug 30, 2004 - Published Jun 23, 2005 - Tae Han - Han Tae M.
The implicit token CSMA/CA protocol includes applying a token passing protocol to ... applying a carrier sense multiple access/collision avoidance mechanism to transmit data .... The reservation process is a five-phase procedure and takes a long time. .... The SIFS period is used mostly in a control frame.
Overview · Related · Discuss

Hybrid time division multiple access (tdma)-carrier sense multiple ...



www.google.com/patents/US20080112371
App. - Filed Nov 15, 2006 - Published May 15, 2008 - Avinash Joshi - Motorola, Inc.
A hybrid TDMA-CSMA MAC protocol is provided for allocating time slots within ... access (csma) medium access control (mac) for multi-hop ad hoc networks ..... Carrier Sense Multiple Access (CSMA) is a probabilistic Media ... a slot allocation process in accordance with some embodiments of the invention.
Overview · Related · Discuss

Google process control system with plurality of threads

All Images Videos News More Settings Tools

About 20,200,000 results (0.38 seconds)

Process control system using feed forward control threads based on ...



www.google.com/patents/US6148239

Grant - Filed Dec 12, 1997 - Issued Nov 14, 2000 - Merritt L. Funk - Advanced Micro Devices, Inc.

A **process control system** using feed forward control **threads** based on ... selecting a **plurality** of **process control** variables that are known to ...

Overview · Related · Discuss

Method and apparatus for consolidating process control



www.google.com/patents/US20080125883

App. - Filed Sep 11, 2006 - Published May 29, 2008 - Christopher Gould - Christopher Gould

A **system** for consolidating **process control** for a process comprising a **plurality** of control **threads** each associated with a stage of said process ...

Overview · Related · Discuss

Automated control thread determination based upon post-process ...



www.google.com/patents/US7315765

Grant - Filed Jul 29, 2005 - Issued Jan 1, 2008 - Alan Grosvenor Ranft - Advanced Micro Devices, Inc.

A combination of at least a portion of the **plurality** of **processing** tools is ... and a **system** for determining a **control thread** based upon a **process** ...

Overview · Related · Discuss

Data processing control system, controller, data processing control ...



www.google.com/patents/US6807623

Grant - Filed Jul 26, 2001 - Issued Oct 19, 2004 - Manabu Migita - Matsushita Electric Industrial Co., Ltd.

A data **processing control system** has a controller wherein the controller ... or waiting to be executed by the **plurality** of data processing devices reaches the ... 1 generates a child **thread** to process the data access request (S2).

Overview · Related · Discuss

Multiprocessor system, multiple threads processing method and program



www.google.com/patents/US8615762

Grant - Filed Jun 12, 2009 - Issued Dec 24, 2013 - Yoshihiko Nishihata - Nec Corporation

a **plurality** of processors executing multiple **threads** to **process** data; and .... Data **processing** starting section FS 202 **controls** the order ...

Overview · Related · Discuss

Central processing unit for processing a plurality of threads using ...



www.google.com/patents/US5524250

Grant - Filed Dec 23, 1994 - Issued Jun 4, 1996 - Greg Chesson - Silicon Graphics, Inc.

Central **processing** unit for **processing** a **plurality of threads** using ..... of file **system** records and **control** structures in a computer memory.

Overview · Related · Discuss

Multi-thread graphics processing system



www.google.com/patents/US7742053

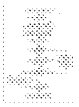
Grant - Filed May 9, 2007 - Issued Jun 22, 2010 - Laurent Lefebvre - Ati Technologies Ulc



The graphics **processing system** of claim 5 , wherein the **plurality** of ... and **control** multiple command **threads** relating to texture applications.
Overview · Related · Discuss

Background thread processing in a multithread digital signal processor

www.google.com/patents/WO2007048132A2?cl=en
App. - Filed Oct 20, 2006 - Published Apr 26, 2007 - Lucian Codrescu - Qualcomm Incorporated
The method and **system** form a background **thread** interrupt as one of a ... which associates with at least a subset of said **plurality** of processing **threads**. ... a background **thread processing control** method and **system** for a multi ...
Overview · Related · Discuss

Background thread processing in a multithread digital signal processor

www.google.com/patents/US7913255
Grant - Filed Oct 20, 2005 - Issued Mar 22, 2011 - Lucian Codrescu - Qualcomm Incorporated
The method and **system** form a background **thread** interrupt as one of a **plurality** ... associates with at least a subset of said **plurality** of **processing threads**. ... Global **control** register 122 includes IPEND register 128, vector base ...
Overview · Related · Discuss

Process control system and control method therefor

www.google.com/patents/US7917905
Grant - Filed Jul 3, 2006 - Issued Mar 29, 2011 - Hiroshi Itoh - Lenovo (Singapore) Pte. Ltd.
A **process control system** has a process state detection unit 10 that detects ... In a **plurality** of control **threads** that are created for a **plurality** of ...
Overview · Related · Discuss

Google sensor communication via control carrier-sense multiple access protocol

All Images Videos Shopping More Settings Tools

About 79,900 results (0.41 seconds)

Carrier sense multiple access (csma) protocols for power line ...



www.google.com/patents/US20140233586

App. - Filed Apr 29, 2014 - Published Aug 21, 2014 - Shu Du - Texas Instruments Incorporated

The method may also include performing a physical carrier **sensing** ... In response to the physical carrier **sensing** operation indicating that the **communication** ... **Carrier sense multiple access** (csma) **protocols** for power line ..... may be coupled to **control** center 130 (e.g., a utility company) **via** network 120.

Overview · Related · Discuss

Carrier sense multiple access (csma) protocols for power line ...



www.google.com/patents/US20150288534

App. - Filed Jun 19, 2015 - Published Oct 8, 2015 - Shu Du - Texas Instruments Incorporated

The method may also include performing a physical carrier **sensing** ... **Carrier sense multiple access** (csma) **protocols** for power line **communications** (plc) ... (PLC) device coupled with a data concentrator **via** the **communication** channel. ... the gateway engine includes a media access **control** (MAC) layer ...

Overview · Related · Discuss

Carrier sense multiple access (csma) protocols for power line ...



www.google.com/patents/WO2012078785A2?cl=en

App. - Filed Dec 7, 2011 - Published Jun 14, 2012 - Shu Du - Texas Instruments Incorporated

A method may include performing a virtual carrier **sensing** operation and, ... In response to the physical carrier **sensing** operation indicating that the **communication** ... **Carrier sense multiple access** (csma) **protocols** for power line ..... be coupled to **control** center 130 (e.g., a utility company) **via** network 120.

Overview · Related · Discuss

Carrier sense multiple access (CSMA) protocols for power line ...



www.google.com/patents/US8711873

Grant - Filed Nov 21, 2011 - Issued Apr 29, 2014 - Shu Du - Texas Instruments Incorporated

Systems and methods for **carrier sense multiple access** (CSMA) ... carrier **sensing** operation indicating that a **communication** channel is idle, ... 114 may be coupled to **control** center 130 (e.g., a utility company) **via** network 120.

Overview · Related · Discuss

Carrier sense multiple access (CSMA) protocol with multi-packet ...



www.google.com/patents/US8406175

Grant - Filed Feb 19, 2010 - Issued Mar 26, 2013 - Cesar A. Santivanez - Raytheon Bbn Technologies Corp.

Carrier sense multiple access (CSMA) **protocol** with multi-packet reception (MPR) .... an access **controller** configured to initiate a **sensing** request to .... network often **communicate using** a **carrier sense multiple access** (CSMA) ...

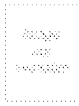
Overview · Related · Discuss

Hybrid implicit token carrier sensing multiple access/collision ...

www.google.com/patents/US20050135408

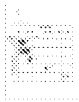
App. - Filed Aug 30, 2004 - Published Jun 23, 2005 - Tae Han - Han Tae M.

applying a token passing **protocol** to transmit voice traffic in real time by having a band in ... applying a **carrier sense multiple access**/collision avoidance mechanism to .... In this **protocol**, a node does not respond **using** the RTS and the CTS frames in its .... The SIFS period is used mostly in a **control** frame.
Overview · Related · Discuss

Methods and systems for channel sensing multiple access ...

www.google.com/patents/WO2006099463A2?cl=en
App. - Filed Mar 15, 2006 - Published Sep 21, 2006 - Douglas S. Chan - Cornell Research Foundation, Inc.
Methods and systems for **communication using carrier sense multiple access** (CSMA) ... a transmitter/receiver **control** subsystem capable of determining a ... Such systems employ channel-accessing **protocols** that refrain from ...
Overview · Related · Discuss

Methods and systems for channel sensing multiple access ...

www.google.com/patents/US7839775
Grant - Filed Mar 14, 2006 - Issued Nov 23, 2010 - Douglas S. Chan - Cornell Research Foundation, Inc.
Methods and Systems for **communication using carrier sense multiple access** (CSMA) ... The data **communication** system of claim 1 wherein said **control** ..... Such systems employ channel-accessing **protocols** that refrain from ...
Overview · Related · Discuss

Methods for providing prioritized communications using a carrier ...

www.google.com/patents/US20050213602
App. - Filed Mar 24, 2005 - Published Sep 29, 2005 - Jason Redi - Bbnt Solutions Llc
Methods for providing prioritized **communications using a carrier sense multiple access protocol**. US 20050213602 A1. Abstract. A method of ...
Overview · Related · Discuss

Arrangement for accessing media in a network having universal ...

www.google.com/patents/US5774658
Grant - Filed Sep 17, 1996 - Issued Jun 30, 1998 - Mohan Kalkunte - Advanced Micro Devices, Inc.
... Multiple Access (UMA) stations **using** a time slot multiple access **protocol**. ... of the media **using** Ethernet-compliant, **carrier-sense multiple-access** with collision ... a second **detector** for determining a second number of CSMA/CD ... Each local area network architecture uses a media access **control** (MAC) ...
Overview · Related · Discuss

Google sensor network using csma

All Images News Shopping More Settings Tools

About 11,300 results (0.55 seconds)

Sensor network system and communication method thereof



www.google.com/patents/US8467327

Grant - Issued Jun 18, 2013 - Seung Ki Hong - Electronics And Telecommunications Research Institute

In reporting event occurrence in a real-time **sensor network** ... However, when a data packet is transmitted **using CSMA**/CA technique, a portion ...

Overview · Related · Discuss

CSMA with dynamic persistence



www.google.com/patents/US5706274

Grant - Filed Sep 7, 1995 - Issued Jan 6, 1998 - Dean A. Angelico - Tetherless Access Ltd. (Tal)

transmitting to nodes on said wireless network to determine the existence ..... Multiaccess carrier **sensing network** communication protocol **with** ...

Overview · Related · Discuss

Iot enabled wireless one-go/all-go platform sensor network ...



www.google.com/patents/US20160029346

App. - Filed Jul 22, 2014 - Published Jan 28, 2016 - Sandeep Suresh - Honeywell International Inc.

Iot enabled wireless one-go/all-go platform **sensor network** solutionfor ..... For example, wireless sensors **using CSMA**/CA will remain ...

Overview · Related · Discuss

Iot enabled wireless one-go/all-go platform sensor network solution ...



www.google.com/patents/EP2977971A1?cl=en

App. - Filed Jul 10, 2015 - Published Jan 27, 2016 - Sandeep Suresh - Honeywell International Inc.

Iot enabled wireless one-go/all-go platform **sensor network** solution for ... a plurality of remotely located devices, each **with** a sound transducer and a ..... For example, wireless sensors **using CSMA**/CA will remain completely ...

Overview · Related · Discuss

Dynamic sensing point CSMA packet switching controller



www.google.com/patents/US4979168

Grant - Filed Oct 28, 1988 - Issued Dec 18, 1990 - Pierre-Jacques F. Courtois - U.S. Philips Corporation

A station for **use** in a non-persistent controlled **CSMA** packet .... a 16K bits/sec VHF Packet Radio **Network**", Proceedings of IEEE MILCOM '83, ...

Overview · Related · Discuss

Method for controlling media access in wireless sensor network



www.google.com/patents/US20070019604

App. - Filed Apr 28, 2006 - Published Jan 25, 2007 - Kyeong Hur - Samsung Electronics Co., Ltd.

A media access control method of a wireless **sensor network** (WSN) is ... **with** a CH **with** the **CSMA**/CA (Carrier Sensor Multiple Access/Collision ...

Overview · Related · Discuss

Wlan services over catv using csma/ca



www.google.com/patents/EP1709825A2?cl=en

App. - Filed Jan 26, 2005 - Published Oct 11, 2006 - Mordechai Zussman - Passover, Inc.



Further, an Enhanced In Door WiFi Unit (EID-WiFi) is connected to the CATV **network**. The WEM includes downstream carrier **sensing** of uplink ...

Overview · Related · Discuss

Wireless sensor networks with data reception acknowledgement



www.google.com/patents/WO2010100445A1?cl=en

App. - Filed Feb 4, 2010 - Published Sep 10, 2010 - Saied Abedi - Fujitsu Limited

Wireless **sensor networks with** data reception acknowledgement ..... frame and the device 1 1 sends a data frame 42 at will **using** CSMA-CA.

Overview · Related · Discuss

Wireless sensor networks with data reception acknowledgement



www.google.com/patents/EP2226958A1?cl=en

App. - Filed Mar 4, 2009 - Published Sep 8, 2010 - Saied Abedi - Fujitsu Limited

A method for monitoring an entity **using** a wireless **sensor network** of ..... frame and the device 11 sends a data frame 42 at will **using** CSMA-CA.

Overview · Related · Discuss

Sensor network and method of link extension based on time slot ...



www.google.com/patents/US9301246

Grant - Filed Jan 16, 2013 - Issued Mar 29, 2016 - Seong-Soon Joo - Electronics And Telecommunications Research Institute

A **sensor network** includes: a network coordinator that broadcasts a first ... the sensor device transmits the data frame **with** a CSMA-CA method.

Overview · Related · Discuss

Google sensors and actuators controlled via plurality of threads

All News Images Videos More Settings Tools

About 55,100 results (0.47 seconds)

Ball screw actuator for aircraft control surfaces



www.google.com/patents/US6851648

Grant - Filed Aug 19, 2003 - Issued Feb 8, 2005 - Federico Perni - Umbra Cuscinetti S.P.A.

A ball screw **actuator** for aircraft **control** surfaces includes a lead screw, ... on the **control** screw **via** a **plurality** of balls movable on the **thread** of the screw. ... activated by the **sensor** mechanism, are thrust by respective springs ...

Overview · Related · Discuss

Advanced equipment control system



www.google.com/patents/US5546301

Grant - Filed Jul 19, 1994 - Issued Aug 13, 1996 - Mukul Agrawal - Honeywell Inc.

a **plurality** of active **thread** means for affecting a **plurality** of methods ..... >Get **sensor** values from, and set **actuator** value **through**, a uniform ..

Overview · Related · Discuss

System and method for threading a web through a printing device



www.google.com/patents/US9044977

Grant - Filed Jun 17, 2011 - Issued Jun 2, 2015 - Matthew R. McLaughlin - Xerox Corporation

A controller activates at least one **actuator** to rotate a roller ... A method of **threading** a media web **through** a media path in a ... a first **sensor** operatively connected to a first roller in the **plurality** of ..... Controller 128 is configured to **control** various subsystems, components and functions of printing system 100.

Overview · Related · Discuss

Method and device for feeding a yarn or thread to a processing ...



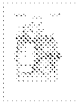
www.google.com/patents/US9181064

Grant - Filed May 17, 2011 - Issued Nov 10, 2015 - Tiziano Barea - Btsr International S.P.A.

an **actuator controlled** by the **control** unit, and ... monitor, **via** the tension **sensor**, a measured tension of the spoolable material between .... A system for feeding a **plurality** of yarns or **threads** to a textile machine, comprising a ...

Overview · Related · Discuss

Projector for automatically threading, rewinding, and indexing a ...



www.google.com/patents/US3761167

Grant - Filed May 17, 1971 - Issued Sep 25, 1973 - E Henriksen - Bell & Howell Co

Sensing means at the film path condition the projector for (1) forward ... Projector for automatically **threading**, rewinding, and indexing a **plurality** of film ..... mechanism **actuator** 250 as **controlled** by the circuit **through sensor** ...

Overview · Related · Discuss

Projector for automatically threading, rewinding, and indexing a ...



www.google.com/patents/US3747871

Grant - Filed May 17, 1971 - Issued Jul 24, 1973 - E Henriksen - E Henriksen

Sensing means at the film path condition the projector for (1) forward ... Projector for automatically **threading**, rewinding, and indexing a **plurality** of film spools ..... mechanism **actuator** 250 as

controlled by the circuit **through sensor** 262 which ...
Overview · Related · Discuss

Electronic control of needle thread in a sewing machine



www.google.com/patents/US4215641
Grant - Filed Jul 5, 1979 - Issued Aug 5, 1980 - Leo Dobrjanskyj - The Singer Company
A sewing machine is provided with an **actuator controlled thread** take-up lever. ... means for **sensing** the thickness of the work fabric and providing a ... The **control** of the **thread** which can be attained **through** the use of ... 12 along a **thread** path defined by a **plurality of thread** guides 34, 36, 38, 40 and 42.
Overview · Related · Discuss

Method and apparatus for providing Haptic feedback from Haptic textile



www.google.com/patents/US8362882
Grant - Filed Dec 10, 2008 - Issued Jan 29, 2013 - Robert W. Heubel - Immersion Corporation
A method and apparatus for generating haptic feedback **over** a surface of a ... a **plurality** of **sensing** circuits capable of providing at least one ... a haptic textile comprising a **plurality** of haptic **threads** configured to provide haptic feedback; and ... . As such, a grid of **actuators** may be used to **control** the surface ...
Overview · Related · Discuss

Electro-pneumatic device for regulating the tension of threads or ...



www.google.com/patents/EP1319621A1?cl=en
App. - Filed Dec 12, 2001 - Published Jun 18, 2003 - Paolo Caviggioli - Eurotrade s.a.s.
For these reasons a proper **control** of the tension of **threads** or ribbons in function of ... precise **control** of the tension, closed loop **control** devices **using sensors** of the tension of ... The regulating **actuator** in the form of pneumatic ... the invention for controlling and regulating the tension of a **plurality of threads**; ...
Overview · Related · Discuss

Force sensor rod



www.google.com/patents/WO2002040345A1?cl=en
App. - Filed May 21, 2001 - Published May 23, 2002 - Daniel Lee Moore - Tyee Aircraft
The **threads** on the protruding end terminate in a **plurality** of axially spaced ... and **through** the tube, the cable operably coupling the force **sensing** ... A force **sensor** rod useful as a **control** rod in an aircraft **actuator** system is ...
Overview · Related · Discuss

Google

thread to obtain sensor readings

All Shopping Images Videos More Settings Tools

About 75,300 results (0.44 seconds)

Apparatus and methods for adaptive thread scheduling on asymmetric ...



www.google.com/patents/US9043795

Grant - Filed Dec 11, 2008 - Issued May 26, 2015 - Michael William Morrow - Qualcomm Incorporated

Techniques for adaptive **thread** scheduling on a plurality of cores for ... **reading** a plurality of temperature **sensors** to determine operating temperatures ... with frequencies of operation of the cores set to zero hertz, to **find** an ...

Overview · Related · Discuss

Apparatus and methods for adaptive thread scheduling on asymmetric ...



www.google.com/patents/EP2374048A2?cl=en

App. - Filed Dec 11, 2009 - Published Oct 12, 2011 - Michael William Morrow - QUALCOMM Incorporated

reading a plurality of direct leakage current **sensors** in the plurality of ... **sensors** with the cores operating frequency set to zero hertz to **find** a ...

Overview · Related · Discuss

Sensor for reading banknotes, security papers and the like, ...



www.google.com/patents/US8960544

Grant - Filed Jun 24, 2008 - Issued Feb 24, 2015 - Maurizio Lazzerini - Fedrigoni S.P.A.

A **reading sensor** adapted to read a security element having magnetic ... EP 516 790 discloses a **thread** in which detectable magnetic regions are ... which can be **obtained** by **reading** the security element according to FIGS.

Overview · Related · Discuss

Method of reading a security thread



www.google.com/patents/US5889271

Grant - Filed Nov 7, 1995 - Issued Mar 30, 1999 - Martin John Webb - Webb; Martin John

A security **thread detector** assembly for **reading** a security **thread** carried by a security document and coded such that each of a succession of segments along ...

Overview · Related · Discuss

Scalable, concurrent, distributed sensor system and method



www.google.com/patents/US7333921

Grant - Filed May 9, 2006 - Issued Feb 19, 2008 - Stephen Taylor - Stephen Taylor

Analysis **threads** may also concurrently access the **sensor** files to perform ... with one of the analysis terminals a reader **thread** for **reading sensor** data in a ..... and may extend to other **sensors** capable of **obtaining sensor** data.

Overview · Related · Discuss

In-situ sensor method and device



www.google.com/patents/US5210499

Grant - Filed Nov 16, 1990 - Issued May 11, 1993 - Shawn M. Walsh - The United States Of America As Represented By The Secretary Of The Army

The **sensors** used are electrically conductive **threads** arranged in a ... The data **obtained** for the monitoring of the flow and cure of resin ... This resistance measurements or **reading** is what is sensed by the scanner.

Overview · Related · Discuss

Malicious activity detection of a processing thread



www.google.com/patents/US9218468

Grant - Filed Aug 28, 2013 - Issued Dec 22, 2015 - Chen-Yong Cher - Globalfoundries U.S. 2 Llc

Responsive to the **thread** activity levels differing from the known profile ... The apparatus of claim 6 , wherein the covariance matrix is **obtained** from a ... as a result of the on-chip activity (in the form of thermal **sensor readings**), ...

Overview · Related · Discuss

Operating system thread scheduling for optimal heat dissipation



www.google.com/patents/US8051276

Grant - Issued Nov 1, 2011 - Orran Y. Krieger - International Business Machines Corporation

Temperature **sensors** measure temperature throughout various parts of a .. In one aspect, the observed temperature **values** are recorded on registers. ... for example, **get** more accurate **reading** of the heat a **thread** generates.

Overview · Related · Discuss

Malicious activity detection of a processing thread



www.google.com/patents/US9251340

Grant - Filed Sep 19, 2013 - Issued Feb 2, 2016 - Chen-Yong Cher - Globalfoundries Inc.

Responsive to the **thread** activity levels differing from the known profile ... The method of claim 1 , wherein the covariance matrix is **obtained** from a .... result of the on-chip activity (in the form of thermal **sensor readings**), and/or ...

Overview · Related · Discuss

Elastically stretchable fabric force sensor arrays and methods of ...



www.google.com/patents/US8661915

Grant - Filed Apr 23, 2012 - Issued Mar 4, 2014 - Geoffrey L. Taylor - Stryker Corporation

The **threads** are fixed to a single one or pair of flexible elastically stretchable substrate ... Measurements of conductance **values** of pairs of **sensor**, which vary ..... to **obtain** the desired resistance and piezoresistive properties.

Overview · Related · Discuss

Google web based control of actuators

Sign in

All Images News Shopping More Settings Tools

About 106,000 results (0.40 seconds)

Webserver-based well instrumentation, logging, monitoring and control

www.google.com/patents/US6801135
Grant - Filed May 22, 2001 - Issued Oct 5, 2004 - Roger L. Schultz - Halliburton Energy Services, Inc.
... **webserver** at a remote location may operate the **actuator** to **control** operation of the well ... A well monitoring and **control** system, comprising:.
Overview · Related · Discuss

System for overall control of different transverse profiles in a ...

www.google.com/patents/US5649448
Grant - Filed May 12, 1995 - Issued Jul 22, 1997 - Jouni Koskimies - Valmet Corporation
controlling the regulation of at least one of said **actuators based** on the ... of the **web** and **controls** a respective one of said **actuators** by means of ...
Overview · Related · Discuss

Electric linear actuator

www.google.com/patents/CA2831197A1?cl=en
App. - Filed Oct 28, 2013 - Published Apr 28, 2015 - Patrick Mcfadden - Patrick Mcfadden
The **control** processor selectively activates the coils to cause movement ... this will permit **web based** user configuration and permit the yoke to ...
Overview · Related · Discuss

Network-based control method and system for controlling a whole-flow ...

www.google.com/patents/US20130297055
App. - Filed May 4, 2012 - Published Nov 7, 2013 - Fei Wang - Fei Wang
A **web-based** automation **control** method and system for controlling a ... humidity **actuators**, temperature sensors and temperature **actuators**. 10.
Overview · Related · Discuss

Cross direction wireless actuator

www.google.com/patents/US7147164
Grant - Filed Dec 30, 2005 - Issued Dec 12, 2006 - Gary Burma - Honeywell Asca, Inc.
... device **based** upon the received **control** and functional information. ... The intelligent wireless CD **actuator** of claim 1 , wherein said **control** and .... wet end or in the dryer section, **control** the moisture content of the paper **web**.
Overview · Related · Discuss

Actuator system for use in control of a sheet or web forming process

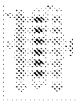
www.google.com/patents/US20060185809
App. - Filed Feb 23, 2005 - Published Aug 24, 2006 - Rudolph Elfrink - Abb.
Actuator system for use in **control** of a sheet or **web** forming process .... **Based** upon the detected cross directional variations, appropriate ...
Overview · Related · Discuss

Remote control of fluid-handling devices

www.google.com/patents/US8649909
Grant - Filed Dec 7, 2012 - Issued Feb 11, 2014 - Aaron Phillips - Amplisine Labs, LLC



a first layer of **control** in which targeted states of the fluid handling devices are ... claim 1 , wherein the system is operative to provide **web-based control** and ..... In some cases, the fluid-handling device may include an **actuator**, ...
Overview · Related · Discuss

Process control system using spatially dependent data for ...

www.google.com/patents/US7882049
Grant - Issued Feb 1, 2011 - L. Paul Collette, III - Rockwell Automation Technologies, Inc.
controlling an **actuator** array via manual input by the operator to change a .... Improper **control** of process conditions in **web-based** processes, ...
Overview · Related · Discuss

Smartphone and microcontroller based remote monitoring and control ...

www.google.com/patents/EP2683146A1?cl=en
App. - Filed Jun 3, 2013 - Published Jan 8, 2014 - Martin Lambert - Martin Lambert
A smartphone (3) based remote monitoring and **control** system which ... and/or to activate **actuators** (7) **controlled** by the microcontroller unit (5) or the .. operating systems integrate with **web-based** marketplaces that offer ...
Overview · Related · Discuss

Cloud-based refrigeration system

www.google.com/patents/US20140148969
App. - Filed Nov 18, 2013 - Published May 29, 2014 - Marco Emilio Graziano - Visible Energy Inc.
A cloud-**based control** system for controlling at least one refrigerated temperature ... at least one **actuator** electrically connected to said refrigerated ... wherein said computing cloud further comprises a **web** application server ...
Overview · Related · Discuss

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14984422	PHILLIPS, AARON
	Examiner	Art Unit
	CHRISTOPHER E EVERETT	2121

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Search of PALM using inventor search	12/9/2016	CEE
Search of Google patent using text searches	12/9/2016	CEE
Search of EAST using inventor, assignee, and text searches	12/9/2016	CEE
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	12/9/2016	CEE
Search of 700/1,282,275,281,42 using text searches	12/9/2016	CEE
Search of 702/6,13,183,188 using text searches	12/9/2016	CEE
Search of 709/224 using text searches	12/9/2016	CEE
Search of 166/336,363,250.1 using text searches	12/9/2016	CEE
Search of 340/853.3,853.2,856.3 using text searches	12/9/2016	CEE

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/CHRISTOPHER E EVERETT/ Primary Examiner.Art Unit 2121

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 NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/984,422	12/30/2015	Aaron Phillips	034392-0444743

CONFIRMATION NO. 1094

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

PUBLICATION NOTICE

OC00000082351774

Title:REMOTE CONTROL OF FLUID-HANDLING DEVICES

Publication No.US-2016-0109871-A1
Publication Date:04/21/2016

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 accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

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 Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, 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 the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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.
14/984,422	12/30/2015	Aaron Phillips	034392-0444743	1094

909 7590 02/10/2016

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

EXAMINER	

ART UNIT	PAPER NUMBER
2121	

NOTIFICATION DATE	DELIVERY MODE
02/10/2016	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
heather.marthers@pillsburylaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Doc Code:
TRACK1.GRANT

Decision Granting Request for Prioritized Examination (Track I or After RCE)	Application No.:14/984,422

1. THE REQUEST FILED December 30, 2015 IS **GRANTED.**

The above-identified application has met the requirements for prioritized examination
A. ☒ for an original nonprovisional application (Track I).
B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination.** The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

A. filing a **petition for extension of time** to extend the time period for filing a reply;
B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims**, or a multiple dependent claim;
C. filing a **request for continued examination**;
D. filing a notice of appeal;
E. filing a request for suspension of action;
F. mailing of a notice of allowance;
G. mailing of a final Office action;
H. completion of examination as defined in 37 CFR 41.102; or
I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to Kimberly Inabinet at 571-272-4618.

/Kimberly Inabinet/ Paralegal Specialist, Office of Petitions

Office of Petitions: Decision Count Sheet

Mailing Month

Application No. 14984422

14984422

For US serial numbers: enter number only, no slashes or commas. Ex: 10123456
For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345

Deciding Official: Kimberly Inabinet

Count (1) - Palm Credit 14/984,422

Decision: GRANT

FINANCE WORK NEEDED
☐ Select Check Box for YES

GRANT

Decision Type: 643 - Track One request

643

Notes:

Count (2)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Count (3)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Initials of Approving Official (if required)

If more than 3 decisions, attach 2nd count sheet & mark this box ☐

Printed on: *2/5/2016*

Office of Petitions Internal Document - Ver. 5.0

Office of Petitions: Routing Sheet



Application No. 14/984,422

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

- [X] **GRANTED**
- [ ] **DISMISSED**
- [ ] **DENIED**

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 NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
14/984,422	12/30/2015	2652	850	034392-0444743	23	1

CONFIRMATION NO. 1094

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

FILING RECEIPT

OC000000079889848

Date Mailed: 01/14/2016

Receipt is acknowledged of this non-provisional 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 APPLICANT, 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 Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections 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**

Inventor(s)
Aaron Phillips, Lubbock, TX;

Applicant(s)
AmpliSine Labs, LLC., Lubbock, TX;

Power of Attorney: None

Domestic Priority data as claimed by applicant
This application is a CON of 14/147,190 01/03/2014
which is a CON of 13/708,557 12/07/2012 PAT 8649909

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: 01/13/2016
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/984,422**

Projected Publication Date: 04/21/2016

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

REMOTE CONTROL OF FLUID-HANDLING DEVICES

Preliminary Class

379

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 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 AssetsControl, 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).

SelectUSA

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: 14/984,422

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	23 minus 20 =	* 3	x 40 =	120	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x 210 =	0.00			
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).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	850		TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
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))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
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))									
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.

Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	Aaron Phillips	Nonprovisional Application Number (if known):	
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☑ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Joshua Tucker/	Date December 30, 2015
Name (Print/Typed) Joshua Tucker	Practitioner Registration Number 63809

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☑ *Total of 1 forms are submitted.

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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

PATENT APPLICATION

REMOTE CONTROL OF FLUID-HANDLING DEVICES

CROSS-REFERENCE TO RELATED APPLICATIONS

[001] The present application is a continuation of U.S. Patent Application 14/147,190, 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

[002] 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

[003] 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.

[004] 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.

[005] 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

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

[007] 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..

[008] 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.

[009] 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 hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising:

a computer-implemented datastore storing:

a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and

network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators;

a computer-implemented facility-interface module or modules configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections; and

a computer-implemented web-interface module or modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices,

wherein the system is configured to receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, identify a network address in the datastore corresponding to a facility at which the actuator is located, and send instructions with the facility-interface module or modules to the facility to actuate the actuator.

2. The system of claim 1, wherein the sensors include a tank level sensor of a tank at one of the facilities, and wherein the datastore includes a record associating the tank with the facility, data from the tank being unavailable to users without an account associated with the tank.

3. The system of claim 1, wherein the sensors include a level sensor of an oil/water separation tank at one of the facilities configured to indicate a level at which oil meets water, and wherein the datastore includes a record associating the tank with the facility.

4. The system of claim 1, wherein the sensors include a leak detector at one of the facilities, and wherein the datastore includes a record associating the leak detector with the facility.

5. The system of claim 1, wherein:

the web-interface module or modules comprises a web server; and

the facility-interface module or modules comprises a site server distinct from the web server.

6. The system of claim 5, wherein:

the web server communicates with user devices via a first network port of a computing device executing the web server; and

the site server communicates with facilities via a second network port of the computing device, the second network port being different from the first network port.

7. The system of claim 1, wherein:

the data store stores subscription information associated with at least some of the accounts.

8. The system of claim 1, wherein the facility-interface module or modules comprise:

means for interfacing with a plurality of site controllers associated with the facilities.

9. The system of claim 1, wherein the web-interface module or modules comprise:

means for sending instructions to present a control interface on the user devices.

10. The system of claim 1, wherein the datastore stores accounts for more than one hundred facilities, and the web-interface module or modules are configured interface with more than one hundred user devices.

11. The system of claim 1, wherein the facility-interface module or modules are configured to send pull requests to facilities to retrieve data buffered at the facilities.

12. The system of claim 1, comprising:

a controller at one of the facilities communicatively coupled to an actuator or a sensor.

13. The system of claim 12, comprising at least four of the following as distinct threads from one another:

a thread configured to sends and receive data requests;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

14. The system of claim 12, comprising at least two of the following as distinct threads from one another:

a thread configured to sends or receive data request;

a thread configured to synchronize other threads with updated information;

a thread configured to set a target state of actuators;

a thread configured to obtain updated sensor readings;

a thread configured to process user interactions; and

a thread that eliminates other threads upon detecting a problem with the eliminated threads.

15. The system of claim 12, wherein the controller is communicatively coupled to the actuator or sensor via a private local area network.

16. The system of claim 12, wherein controller is communicatively coupled to the actuator or sensor via a frame-based carrier-sense multiple access protocol with collision detection.

17. The system of claim 12, wherein controller is configured to periodically push buffered data to the facility-interface module or modules.

18. The system of claim 12, comprising:

means for ensuring at least some data is not lost if network access ceases intermittently.

19. The system of claim 12, comprising:

means for translating a command for an actuator from an input format to a format configured to effectuate changes in the actuator.

20. The system of claim 19, comprising:

means for executing control routines implicated by translated commands on an individual actuator or sensor.

21. The system of claim 12, comprising:

means for transmitting data to the facility-interface module or modules.

22. The system of claim 12, comprising:

means for checking validity of a command.

23. The system of claim 12, comprising:

an oil or gas facility communicatively coupled to the controller.

ABSTRACT

[0070] 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

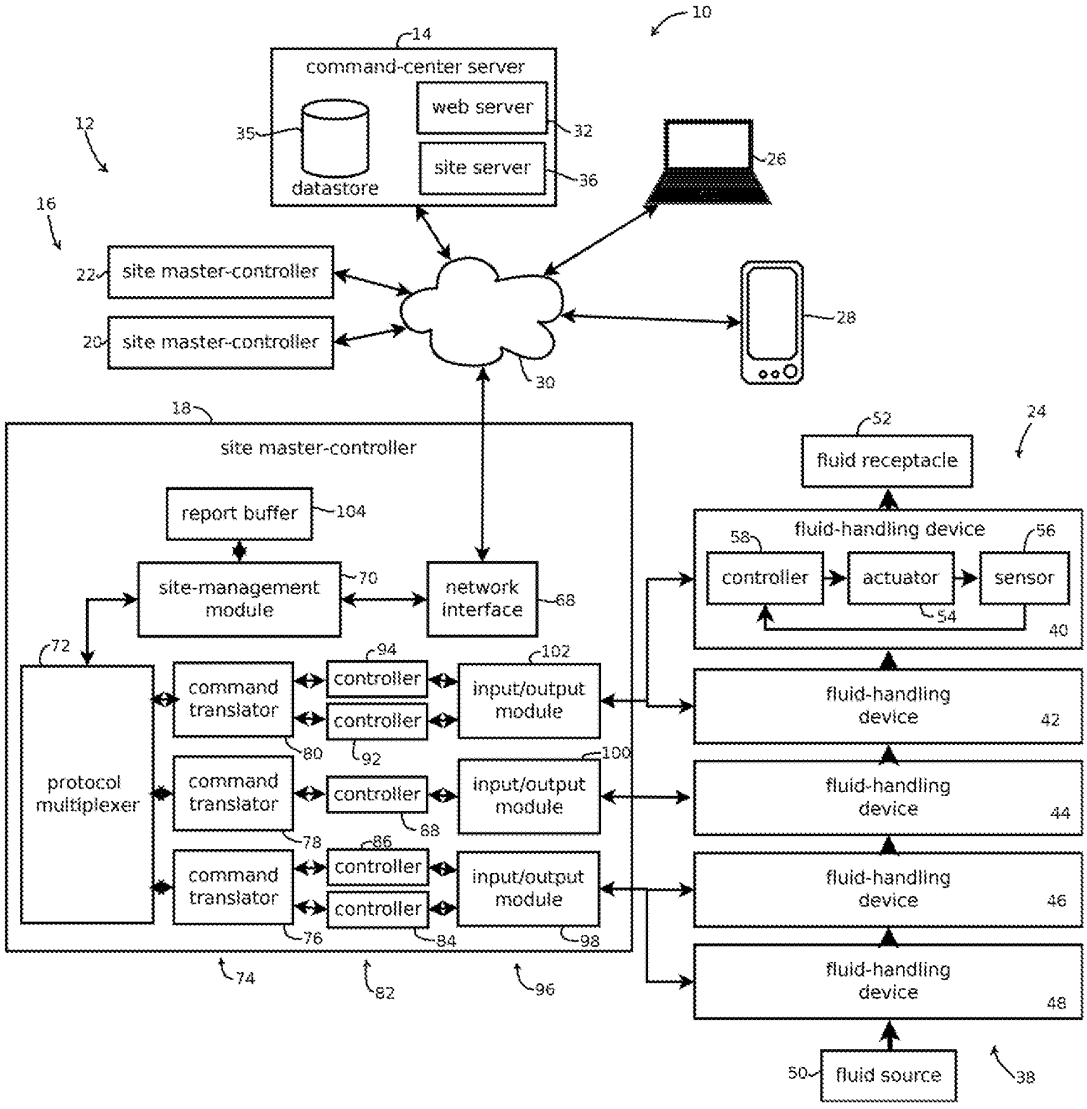

10
14
command-center server
web server
32
site server
36
35
datastore
12
16
26
22
site master-controller
20
site master-controller
28
30
18
site master-controller
report buffer
104
site-management module
70
network interface
68
72
protocol multiplexer
command translator
80
controller
94
controller
92
input/output module
102
command translator
78
controller
88
input/output module
100
command translator
76
controller
86
controller
84
input/output module
98
74
82
96
24
52
fluid receptacle
fluid-handling device
58
controller
actuator
54
sensor
56
40
fluid-handling device
42
fluid-handling device
44
fluid-handling device
46
fluid-handling device
48
50
fluid source
38

FIG. 1

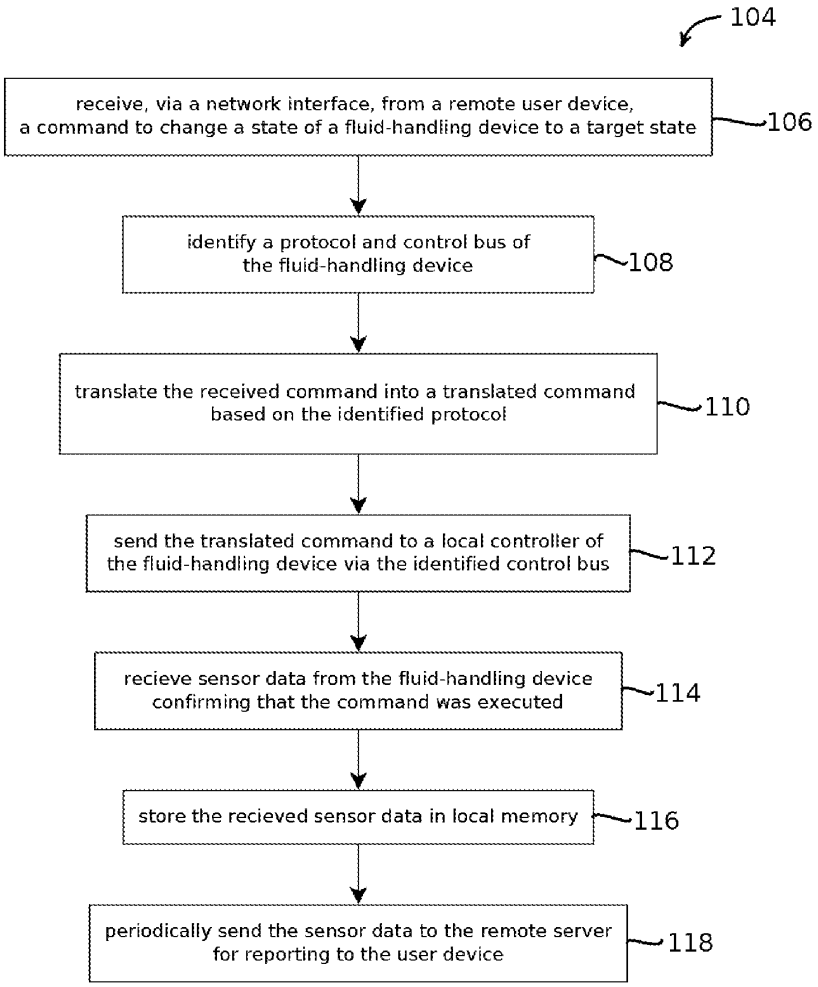

104
receive, via a network interface, from a remote user device, a command to change a state of a fluid-handling device to a target state
106
identify a protocol and control bus of the fluid-handling device
108
translate the received command into a translated command based on the identified protocol
110
send the translated command to a local controller of the fluid-handling device via the identified control bus
112
recieve sensor data from the fluid-handling device confirming that the command was executed
114
store the recieved sensor data in local memory
116
periodically send the sensor data to the remote server for reporting to the user device
118

FIG. 2

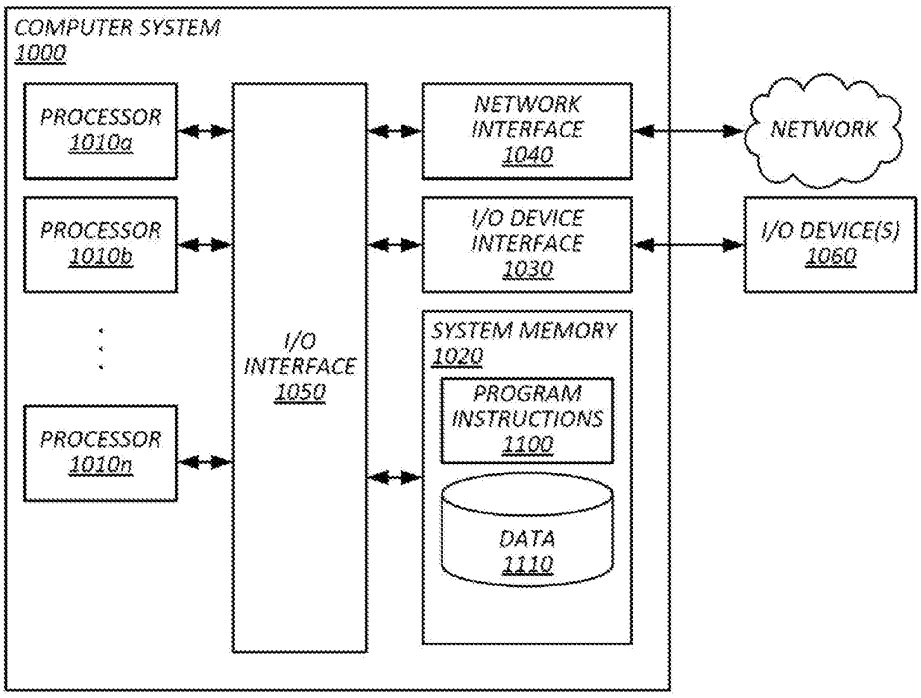

COMPUTER SYSTEM
1000
PROCESSOR
1010a
PROCESSOR
1010b
PROCESSOR
1010n
I/O
INTERFACE
1050
NETWORK
INTERFACE
1040
I/O DEVICE
INTERFACE
1030
SYSTEM MEMORY
1020
PROGRAM
INSTRUCTIONS
1100
DATA
1110
NETWORK
I/O DEVICE(S)
1060

FIG. 3

PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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.

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 14147190 filed 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.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Aaron Phillips Date (Optional) :

Signature:

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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.

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 disclosure of these records is required by the Freedom of Information Act.
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 inspection 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.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	034392-0444743
	Application Number	
Title of Invention	REMOTE CONTROL OF FLUID-HANDLING DEVICES	

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.
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.

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	2806 87th Street
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	034392-0444743	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	3	**Suggested Figure for Publication (if any)**	

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	034392-0444743
	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	14147190	2014-01-03

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	034392-0444743
	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)
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).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

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.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	034392-0444743
	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.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	034392-0444743
	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

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.

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:

If the Applicant is an Organization check here. ☒

Organization Name	AmpliSine Labs, LLC.		
Mailing Address Information For Applicant:			
Address 1	9502 HWY 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.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	034392-0444743
	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)	2015-12-30
First Name	Joshua	Last Name	Tucker	Registration Number	63809

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

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	034392-0444743
	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 CooperationTreaty.

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)).

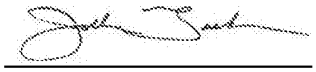
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under 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.

General Authorization for Payment of Fees

The Commissioner is authorized to charge any additional fees that may be required to Deposit Account No. 033975.



Josh Tucker
Reg. No. 63809

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 Procedure[1] (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."

Electronic Patent Application Fee Transmittal	
Application Number:	
Filing Date:	
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Filer:	Joshua L. Tucker/Kathryn Seeman
Attorney Docket Number:	034392-0444743
Filed as Small Entity	
Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)	

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360
Request for Prioritized Examination	2817	1	2000	2000
Pages:				
Claims:				
Claims in excess of 20	2202	3	40	120
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Publ. Fee- Early, Voluntary, or Normal	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	2830	1	70	70
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**2920**

Electronic Acknowledgement Receipt	
EFS ID:	24487541
Application Number:	14984422
International Application Number:	
Confirmation Number:	1094
Title of Invention:	REMOTE CONTROL OF FLUID-HANDLING DEVICES
First Named Inventor/Applicant Name:	Aaron Phillips
Customer Number:	909
Filer:	Joshua L. Tucker/Kathryn Seeman
Filer Authorized By:	Joshua L. Tucker
Attorney Docket Number:	034392-0444743
Receipt Date:	30-DEC-2015
Filing Date:	
Time Stamp:	15:40:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$2920
RAM confirmation Number	2318
Deposit Account	033975
Authorized User	TUCKER, JOSH
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	TrackOne Request	TrackOne_Request_034392_0444743.pdf	120267 00f2ab1cc86f09182af99db26e5aa64223a47504	no	2
Warnings:					
Information:					
2		Continuation_Patent_Application_034392_0444743.pdf	208614 0b4eaa5e61974f816e915495025e84fe6fb827ea	yes	28
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Specification		1	23	
	Claims		24	27	
	Abstract		28	28	
Warnings:					
Information:					
3	Drawings-only black and white line drawings	Continuation_Figures_034392_0444743.pdf	460108 6694d4e3fac1f811f55ca6a9fe7f447992e5debe	no	3
Warnings:					
Information:					
4	Oath or Declaration filed	Signed_Declaration_034392_0444743.pdf	247290 0e907d164fd42df7edbc4de4dd77f407f15c942d	no	2
Warnings:					
Information:					
5	Application Data Sheet	Continuation_ADS_034392_0444743.pdf	1823196 651a0e8b8c885cb489437809ac1eb7fd6842d2d4	no	8
Warnings:					
Information:					
6	Miscellaneous Incoming Letter	General_Auth_for_Payment_034392_0444743.pdf	189065 4d7851f5d76326bbf15deecba27557a14d43bf97	no	1

Warnings:					
Information:					
7	Miscellaneous Incoming Letter	No_dup_IDS_for_cons_034392_0444743.PDF	189734 092eda4fbcd7668117f6b305ca563b7614eabb9d	no	1
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	42204 b91da8fbcf24f7a6d6a3ccdf456c969c6ca16e31	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	3280478		

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 a 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.