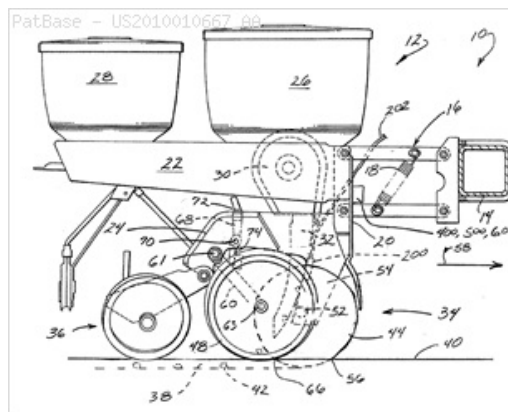


**Title:** PLANTER MONITOR SYSTEM AND METHOD

**Abstract:** A planter monitor system and method that provides an operator with near real-time data concerning yield robbing events and the economic cost associated with such yield robbing events so as to motivate the operator to take prompt corrective action.

**Classifications:**

**Classifications:** A01B79/00 A01C11/00 A01C14/00 A01C15/00  
**International (IPC 8-9):** A01B79/00 A01C11/00 A01C14/00 A01C15/00  
A01C7/00 A01C7/04 B60Q1/26 G06F17/00 G06F19/00 G06F7/70  
G06G7/00 G06G7/76 G06Q30/00 G06Q40/00 G06Q99/00 G06T11/20  
G08B21/00 (Advanced/Invention);  
A01C11/00 G06F17/00 G06Q30/00 G06T11/20 (Core/Invention)  
**CPC:** B60Q1/26 A01C14/00 A01B79/005 A01C7/04 G06Q40/12  
G06Q99/00 Y10S111/903 Y10S715/965 A01C7/105 A01C7/205 A01C7/00  
**European:** A01B79/00P A01C7/04 G06Q40/10 G06Q99/00  
**US:** 111/200 111/903 340/431 340/431P 345/440.2 345/440.200S  
700/231 700/231P 701/29.1 701/50 705/30 705/30S 705/500 715/719  
715/965



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| BRPI0806559 A2     | 20140415         | BR2008PI06559      | 20080107         |
| BRPI0806559 B1     | 20180410         | BR2008PI06559      | 20080107         |
| EP2104413 A1       | 20090930         | EP20080705750      | 20080107         |
| EP2104413 A4       | 20150325         | EP20080705750      | 20080107         |
| EP2104413 B1       | 20170405         | EP20080705750      | 20080107         |
| EP2104413 B8       | 20170607         | EP20080705750      | 20080107         |
| ES2627181 T3       | 20170727         | ES20080705750T     | 20080107         |
| TR201705910 T4     | 20170621         | TR20170005910T     | 20080107         |
| US2010010667 AA    | 20100114         | US20080522252      | 20080107         |
| US2012050023 AA    | 20120301         | US20110292384      | 20111109         |
| US2013138289 AA    | 20130530         | US20130752031      | 20130128         |
| US2014191857 AA    | 20140710         | US20140206643      | 20140312         |
| US8078367 BB       | 20111213         | US20080522252      | 20080107         |
| US8386137 BB       | 20130226         | US20110292384      | 20111109         |
| US8738243 BB       | 20140527         | US20130752031      | 20130128         |
| US9481294 BB       | 20161101         | US20140206643      | 20140312         |
| WO08086318 A1      | 20080717         | WO2008US50445      | 20080107         |

**Priority:**

|                |          |                |          |               |          |
|----------------|----------|----------------|----------|---------------|----------|
| US20070883965P | 20070108 | EP20080705750  | 20080107 | US20080522252 | 20080107 |
| WO2008US50445  | 20080107 | US20080883965P | 20080108 | US20090522252 | 20090706 |
| US20110292384  | 20111109 | US20110282384  | 20111109 | US20130752031 | 20130128 |
| US20140206643  | 20140312 |                |          |               |          |

**Probable Assignee:** CLIMATE CORP

**Assignee(s):** (std): CLIMATE CORP ; KOCH JUSTIN L ; PREC PLANTING INC ; PREC PLANTING LLC ; PREC PLATING LLC ; SAUDER GREGG A

**Assignee(s):** PRECISION PLANTING LLC ; PRECISION PLATING LLC ; PRECISION PLANTING INC

**Inventor(s):** (std) SAUDER GREGG A ; KOCH JUSTIN L ; JUSTIN L KOCH ; GREGG A SAUDER ; KOCH JUSTIN ; SAUDER GREGG

**Agent(s):** WIGHTMAN DAVID ALEXANDER; LAWRENCE JOHN; ARIAS JUAN; ERDEM KAYA; PATENT DEPARTMENT LARKIN HOFFMAN DALY AND LINDGREN LTD; LARKIN HOFFMAN DALY AND LINDGREN LTD; THOMAS J; HICKMAN PALERMO BECKER BINGHAM LLP; OPPOLD THOMAS J

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PZ PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**Title:** METHOD AND SYSTEM FOR USE OF ENVIRONMENTAL CLASSIFICATION IN PRECISION FARMING

**Abstract:** Methods and software for selecting seed products or other agricultural inputs for planting within an associated land base include dividing the field into regions, providing an environmental profile for each of regions, determining a recommendation of a seed product to plant within each of the regions based on the environmental profile and performance of the genotype of each of the seed products in the environmental profile of the regions, and providing an output identifying the seed product to plant within each of the regions.

**Classifications:**

**International (IPC 8-9):** A01B79/00 A01C21/00 G01N37/00 G01W1/00 G01W1/14 G05B19/418 G06F19/00 G06F19/18 G06F7/00 G06F9/44 G06Q30/00 G06Q40/00 G06Q40/02 G06Q50/00 G06Q50/02

G06Q99/00 (Advanced/Invention);  
G06F7/00 G06Q30/00 (Core/Invention)

**CPC:** G06Q10/04 G06Q10/08 G06Q30/0601 G06Q50/28 G06Q40/025 A01B79/005 A01C1/00 A01C21/00 A01H1/04 G06Q20/10 G06Q30/00 G06Q30/0256 G06Q30/0282 G06Q30/0631 G06Q40/00 G06Q40/06 G06Q40/08 Y02A40/12 Y02A40/222 G06Q50/02

**European:** A01B79/00P A01C1/00 A01C21/00 A01H1/04 G06Q10/04 G06Q10/08 G06Q20/10 G06Q30/00 G06Q30/0256 G06Q30/0282 G06Q30/0601 G06Q30/0631 G06Q40/00 G06Q40/06 G06Q40/08 G06Q50/02 G06Q50/28

**US:** 1/1 1/1P 702/19 702/3 702/81 702/81P 705/1 705/1.1 705/14 705/14.11 705/14.24 705/14.54 705/14.540P 705/26.1 705/26.100P 705/26.7 705/26.700P 705/27 705/27P 705/347 705/347S 705/35 705/35S 705/36.00RP 705/36.00RS 705/36R 705/38 705/39 705/39P 705/4 705/4P 705/8 705/8P 705/902 705/902S 707/104.1 707/999.107 707/999.107S

PatBase - US2006282228\_AA

Patent Application Publication Doc. 14, 3806 Sheet 1 of 17 1/5 2006/0282228 A1

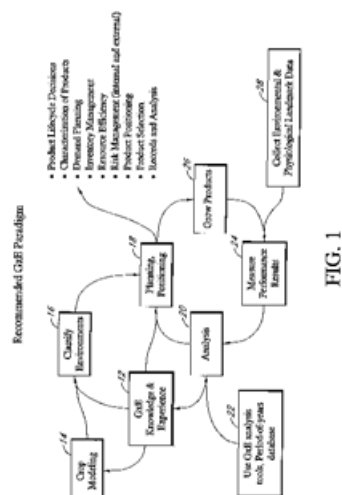


FIG. 1

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| BRPI0611682 A2     | 20100928         | BR2006PI11682      | 20060612         |
| CA2611497 AA       | 20071207         | CA20062611497      | 20060612         |
| CA2611497 C        | 20160503         | CA20062611497      | 20060612         |
| EP1899806 A2       | 20080319         | EP20060784806      | 20060612         |
| EP1899806 A4       | 20140813         | EP20060784806      | 20060612         |
| MX2007015627 A1    | 20080221         | MX20070015627      | 20060612         |
| US2006282228 AA    | 20061214         | US20060423631      | 20060612         |
| US2006282296 AA    | 20061214         | US20060423652      | 20060612         |
| US2006282299 AA    | 20061214         | US20060423642      | 20060612         |
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| US2006293913 AA    | 20061228         | US20060423658      | 20060612         |
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| US2009089171 AA    | 20090402         | US20080330700      | 20081209         |
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| US2009112637 AA    | 20090430         | US20080330710      | 20081209         |
| US2013018586 AA    | 20130117         | US20120618692      | 20120914         |
| US2013198057 AA    | 20130801         | US20130804770      | 20130314         |
| US8032389 BB       | 20111004         | US20060423642      | 20060612         |
| US8046280 BB       | 20111025         | US20060423652      | 20060612         |
| US8249926 BB       | 20120821         | US20080330700      | 20081209         |
| US8290795 BB       | 20121016         | US20080330710      | 20081209         |
| US8417602 BB       | 20130409         | US20080330695      | 20081209         |
| WO06135880 A2      | 20061221         | WO2006US22917      | 20060612         |
| WO06135880 A3      | 20071004         | WO2006US22917      | 20060612         |

**Priority:**

|                         |                         |                         |
|-------------------------|-------------------------|-------------------------|
| US20050689716P 20050610 | US20050722365P 20050930 | US20060760130P 20060119 |
| US20060423523 20060612  | US20060423652 20060612  | US20060423658 20060612  |
| US20060423642 20060612  | US20060423631 20060612  | US20060451054 20060612  |
| WO2006US22917 20060612  | US20080330700 20081209  | US20080330695 20081209  |
| US20080330710 20081209  | US20120618692 20120914  | US20130804770 20130314  |

**Probable Assignee:** PIONEER HI BRED INT INC

**Assignee(s):** (std): AVEY DONALD P ; BAX PHILLIP L ; BAX PHILLIP LEE ; BROOKE GLENN ; BROOKE RICHARD GLENN ; DU PONT ; GOGERTY JOSEPH K ; IWIG ROBERT C ; ERTL DAVID S ; LAUER MICHAEL J ; HARWOOD DAVID ; HARWOOD DAVID J ; HOBBS TROY WM ; GARDNER DOUGLAS L ; PIONEER HI BRED INT INC ; PIONEER HI BRED INT ; MEYER TERRY EUCLAIRE ; PETERSON TODD A ; MEYER TERRY EU CLAIRE

**Assignee(s):** PIONEER HI BRED INTERNATIONAL INC ; EI DUPONT DE NEMOURS AND CO ; E I DU PONT DE NEMOURS AND CO ; E I DUPONT DE NEMOURS AND COMPANY ; E I DU PONT DE NEMOURS AND COMPANY

**Inventor(s):** (std): BAX PHILLIP LEE ; BROOKE GLENN ; FORESMAN JOSEPH P ; GARDNER DOUGLAS L ; GOODMAN ANDREW G ; HARWOOD DAVID ; HOBBS TROY W ; HOBBS TROY WM ; HOOVER SUE M ; IWIG ROBERT C ; MEYER TERRY EU CLAIRE ; MEYER TERRY EUCLAIRE ; SANDERS RUSSELL F ; WANAMAKER J K ; PETERSON TODD A

; MEYER TERRY E ; LAUER MICHAEL J ; HARWOOD DAVID J ; GOGERTY JOSEPH K ; ERTL DAVID S ; BROOKE RICHARD G ; BAX PHILLIP L ; AVEY DONALD P ; BROOKE RICHARD GLENN

**Inventor(s):** BROOKE RICHARD ; BAX PHILLIP ; AVEY DONALD ; WANAMAKER J KENT ; WANAMAKER J ; TODD A PETERSON ; TERRY EUCLAIRE MEYER ; ROBERT C IWIG ; PHILLIP L BAX ; MICHAEL J LAUER ; MEYER TERRY ; LAUER MICHAEL ; JOSEPH K GOGERTY ; GOODMAN ANDREW ; GOGERTY JOSEPH ; GLENN BROOKE ; FORESMAN JOSEPH ; ERTL DAVID ; DONALD P AVEY ; DAVID S ERTL ; DAVID HARWOOD ; PETERSON TODD ; SANDERS RUSSELL ; IWIG ROBERT ; HOOVER SUE ; HOBBS TROY ; GARDNER DOUGLAS

**Agent(s):** TORYS LLP; BENTHAM ANDREW ET AL; MCKEE VOORHEES AND SEASE PLC ATTN PIONEER HI BRED; WOODCOCK WASHBURN LLP

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

### 3) Family number: 44342307 (US2010036696A)

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**Title:** AGRICULTURAL MACHINE AND OPERATOR PERFORMANCE INFORMATION SYSTEMS AND RELATED METHODS

**Abstract:** In one example, a system can comprise a first data gathering mechanism set and a data processing mechanism set. The a first data gathering mechanism set can be configured to gather a first operational data set during operation of a first agricultural machine set, and to transmit the first operational data set to a network. The first operational data set can comprise information representative of one or more characteristics of an agricultural crop during production. The a data processing mechanism can be configured to store a combined data set comprising the first operational data set, and generate one or more reports based on the combined data set. Other embodiments and related methods are also disclosed herein.

#### Classifications:

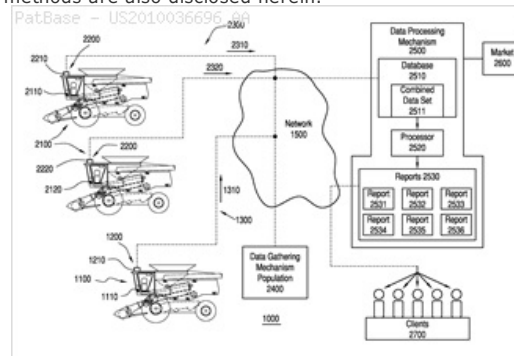
**International (IPC 8-9):** A01B79/00 A01D41/127 G01C21/00 G01V3/00 G06F15/00 G06F15/16 G06F17/30 G06F19/00 G06Q10/00 G06Q10/06 G06Q50/00 G06Q50/02 G07C3/00 G07C5/00 (Advanced/Invention)

**CPC:** G06Q10/06393 A01B79/005 A01D41/127 G06Q10/0637

G06Q10/06375 G09B29/007 G06F16/9537

**European:** A01B79/00P G06Q10/00 G06Q10/06393

**US:** 1/1 701/213 701/213S 701/469 701/469S 701/50 701/50S 702/182 702/182S 705/7 705/7.39 705/7.390P 705/7P 707/100 707/104.1 707/E17.044 707/E17.044S 709/217 709/217S



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2010282934 AA    | 20110217         | AU20100282934      | 20100623         |
| AU2010282934 BB    | 20131107         | AU20100282934      | 20100623         |
| BRPI1014190 A2     | 20160426         | BR2010PI14190      | 20100623         |
| CA2752888 AA       | 20110217         | CA20102752888      | 20100623         |
| EP2465064 A1       | 20120620         | EP20100808492      | 20100623         |
| EP2465064 A4       | 20140924         | EP20100808492      | 20100623         |
| US2010036696 AA    | 20100211         | US20090539376      | 20090811         |
| US2014249893 AA    | 20140904         | US20140279091      | 20140515         |
| US9152938 BB       | 20151006         | US20090539376      | 20090811         |
| WO11019453 A1      | 20110217         | WO2010US39711      | 20100623         |

#### Priority:

US20080188562P 20080811 US20090539376 20090811 WO2010US39711 20100623  
US20140941174P 20140218 US20140279091 20140515

**Probable Assignee:** MACHINERYLINK INC

**Assignee(s):** (std): FARMLINK LLC ; LANG JAY ; MACHINERYLINK INC ; MAYES WILLIAM C ; MORRIS LANDON

**Inventor(s):** (std): MORRIS LANDON ; LANG JAY ; MAYES WILLIAM C ; MCCLURE ROBERT ; LANDON MORRIS ; JAY LANG

**Inventor(s):** WILLIAM C MAYES

**Agent(s):** SPRUSON AND FERGUSON; GOWLING LAFLEUR HENDERSON LLP; LAWRENCE JOHN; BRYAN CAVE LLP; RIVERA PEDRO J

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

### 4) Family number: 51879285 (US8260482B)

© PatBase

**Title:** USER INTERFACE FOR DISPLAYING INTERNAL STATE OF AUTONOMOUS DRIVING SYSTEM

**Abstract:** A passenger in an automated vehicle may relinquish control of the vehicle to a control computer when the control computer has determined that it may maneuver the vehicle safely to a destination. The passenger may relinquish or regain control of the vehicle by applying different degrees of pressure, for example, on a steering wheel of the vehicle. The control

computer may convey status information to a passenger in a variety of ways including by illuminating elements of the vehicle. The color and location of the illumination may indicate the status of the control computer, for example, whether the control computer has been armed, is ready to take control of the vehicle, or is currently controlling the vehicle.

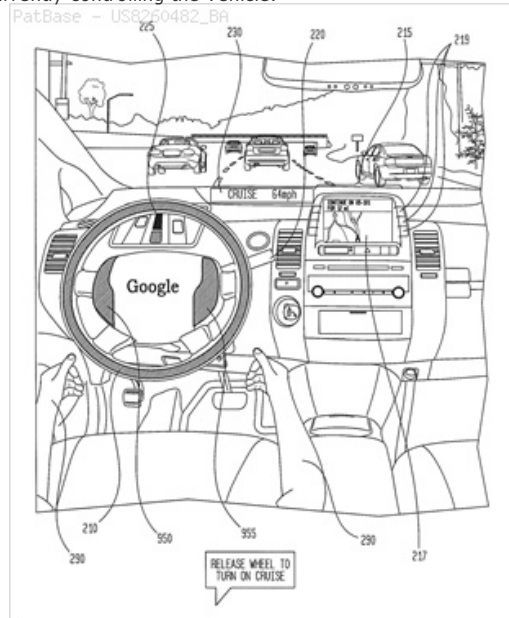
**Classifications:**

**International (IPC 8-9):** B60W10/04 B60W10/18 B60W10/20 B60W10/30 B60W50/10 B60W50/14 B62D6/00 G01C21/36 G01S19/10 G05D1/00 G05D1/02 G06F3/0484 G06T11/00 G06T11/20 (Advanced/Invention); G06F3/0481 (Advanced/Non-invention)

**CPC:** B60K35/00 B60W30/16 B60W2550/14 B60W2550/30 G05D1/0061 B62D1/286 B62D15/025 B60W30/12 B60W2050/146 B60W2550/402 B60W10/04 B60W10/18 B60W10/20 B60W10/30 B60W50/10 G01S19/10 G06F3/04842 G06F3/04847 G05D2201/0213 G01C21/367 G01C21/3676 G06T11/001 G06T2207/30252 G06F3/0481 B60W2550/22 B60W2720/106 B60W50/14 G06T11/20 B60K2370/16

**European:** B62D1/28D B62D15/02F G05D1/00D2 S05D201/0213

**US:** 1/1 382/106 701/23 701/25 701/28 701/301 701/36 701/41 701/410



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US8260482 BA       | 20120904         | US20100832447      | 20100708         |
| US8346426 BA       | 20130101         | US20100769252      | 20100428         |
| US8352110 BA       | 20130108         | US20120567428      | 20120806         |
| US8433470 BA       | 20130430         | US20120707937      | 20121207         |
| US8670891 BA       | 20140311         | US20130788552      | 20130307         |
| US8706342 BA       | 20140422         | US20120682920      | 20121121         |
| US8738213 BA       | 20140527         | US20130781173      | 20130228         |
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| US8825261 BA       | 20140902         | US20140158986      | 20140120         |
| US9132840 BA       | 20150915         | US20140333804      | 20140717         |
| US9134729 BA       | 20150915         | US20140445493      | 20140729         |
| US9519287 BA       | 20161213         | US20150820961      | 20150807         |
| US9582907 BA       | 20170228         | US20150820947      | 20150807         |
| US10082789 BA      | 20180925         | US20160344007      | 20161104         |
| US10093324 BA      | 20181009         | US20170404556      | 20170112         |
| US10120379 BA      | 20181106         | US20170602465      | 20170523         |
| US10293838 BA      | 20190521         | US20170602446      | 20170523         |

**Priority:**

|                        |                        |                        |
|------------------------|------------------------|------------------------|
| US20100769252 20100428 | US20100832447 20100708 | US20120567428 20120806 |
| US20120682920 20121121 | US20120707937 20121207 | US20130781113 20130228 |
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| US20150820947 20150807 | US20160344007 20161104 | US20170404556 20170112 |
| US20170602465 20170523 | US20170602446 20170523 |                        |

**Probable Assignee:** GOOGLE INC

**Assignee(s):** (std): NEMEC PHILIP ; SZYBALSKI ANDREW ; URMSON CHRISTOPHER ; PRADA GOMEZ LUIS RICARDO ; THRUN SEBASTIAN ; URMSON CHRISTOPHER PAUL ; GOOGLE INC ; WAYMO LLC

**Assignee(s):** GOOGLE LLC ; WAYMO HOLDING INC

**Inventor(s):** (std): SZYBALSKI ANDREW TIMOTHY ; GOMEZ LUIS RICARDO PRADA ; URMSON CHRISTOPHER PAUL ; SZYBALSKI ANDREW ; URMSON CHRISTOPHER ; NEMEC PHILIP ; PRADA GOMEZ LUIS RICARDO ; THRUN SEBASTIAN

**Agent(s):** LERNER DAVID LITTENBERG KRUMHOLZ AND MENTLIK LLP; BOTOS CHURCHILL IP LAW

**5) Family number: 44114420 (US2009304940A)**

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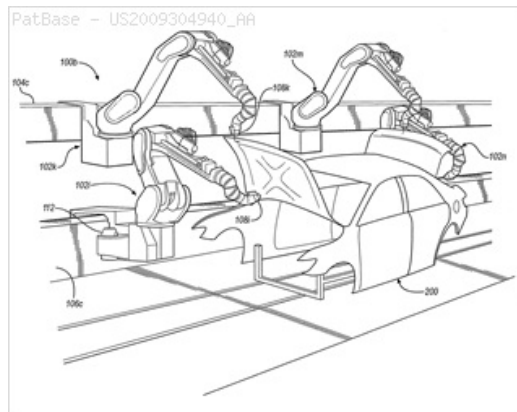
**Title:** COMPACT PAINT BOOTH AND METHOD

**Abstract:** Paint booths for applying paint to an object, as well as methods for degrading coating operations associated with a paint booth, are disclosed. Paint booth may generally include one or more robot rails positioned parallel to the path of the conveyor, and one or more robots positioned on at least one of the rails. Robots may be configured to simultaneously apply a first paint layer to the interior and exterior surfaces of the object. Paint booths may further include one or more additional robots positioned on at least one of the rails and configured to simultaneously apply a second paint layer to the interior and exterior surfaces of the object.

**Classifications:**

**International (IPC 8-9):** B05B1/00 B05B12/00 B05B12/04 B05B12/14

B05B13/04 B05B15/00 B05B15/12 B05B15/70 B05B7/06 B05C11/00  
B05D1/02 B05D3/00 B25J13/00 B25J5/02 B25J9/00 (Advanced/Invention);  
B05B12/14 B05B15/02 B05B15/50 B05C11/10 B05C13/02 B05D1/34  
B05D5/10 (Advanced/Non-invention);  
B05B1/00 B05B12/00 B05B13/02 B05B15/12 B05D1/02  
B25J5/02 (Core/Invention)  
**CPC:** B05C11/1015 B05C13/02 B05B12/14 B05B13/0431 B05B13/0452  
B25J5/02 B25J9/0084 B25J9/0093 B05B15/55 B05B16/20  
**European:** B05B13/04D B05B13/04M2 B25J5/02 B25J9/00P B25J9/00T  
L05B12/14 L05B15/02B  
**US:** 1/1 118/314 118/314S 427/427.2 427/427.200P



## Family:

| Publication number | Publication date | Application number | Application date |
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| CA2725904 AA       | 20101125         | CA20092725904      | 20090605         |
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| CN102046300 A      | 20110504         | CN200980120592     | 20090605         |
| CN102046300 B      | 20141119         | CN200980120592     | 20090605         |
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| US2009304940 AA    | 20091210         | US20090478510      | 20090604         |
| US9375746 BB       | 20160628         | US20090478510      | 20090604         |
| WO09146936 A1      | 20091210         | WO2009EP04062      | 20090605         |

## Priority:

US20080059170 20080605 US20080059170P 20080605 US20080059555P 20080606  
US20080059555 20080606 US20090478510 20090604 EP20090757319 20090605  
WO2009EP04062 20090605

**Probable Assignee:** DURR SYSTEMS GMBH

**Assignee(s):** (std): BUCKNELL THOMAS A ; DJURR SISTEMZ GMBKH ; DUERR SYSTEMS AG ; DUERR SYSTEMS GMBH ; GRIGOLEIT JAN ; HELDT ROBERT F ; SOUGIOLTZIS VASSILIOS ; HELDT ROBERT

**Assignee(s):** DURR SYSTEMS AG ; DURR SYSTEMS GMBH

**Inventor(s):** (std): GRIGOLEIT JAN ; BUCKNELL THOMAS A ; SOUGIOLTZIS VASSILIOS ; HELDT ROBERT ; HELDT ROBERT F ; BUCKNELL THOMAS ; SOUGIOLTZIS VASSILIOS ; VASSILIOS SOUGIOLTZIS ; JAN GRIGOLEIT ; BAKNELL TOMAS A ; KHELDT ROBERT F ; GRIGOLAJT JAN

**Inventor(s):** THOMAS A BUCKNELL ; VASSILIOS SOUGIOLTZIS ; ROBERT F HELDT

**Agent(s):** GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; BEIER RALPH; CURELL MIREIA; RADER FISHMAN AND GRAUER PLLC; BEJIN BIENEMAN PLC

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

## 6) Family number: 48238112 (US2011029144A)

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**Title:** PLUG-IN ELECTRIC VEHICLE SUPPLY EQUIPMENT

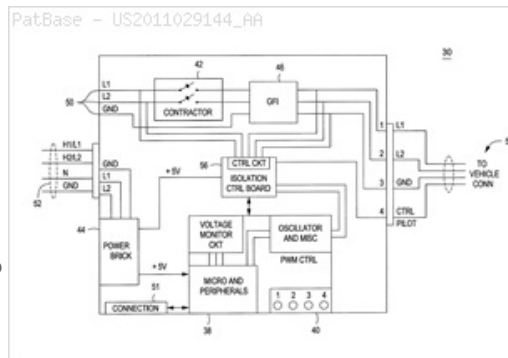
**Abstract:** A system for connecting an electric vehicle to a high voltage power source. The system including an electric vehicle supply equipment (EVSE) having an electrical plug compatible with a high voltage power outlet, the plug connected to a power cord. The power cord is connected to a housing containing a number of electrical components configured to control the power flow to an electric vehicle to recharge the vehicle's batteries. The power cord extends from the housing and is connected to a standard electric vehicle connector compatible with battery electric vehicles (BEV) and plug-in hybrid electric vehicles (PHEV). The EVSE further includes safety measures, such as a relay that controls the flow of power to the vehicle connector and a ground fault interrupter, to protect users from high voltage electric shocks.

## Classifications:

**International (IPC 8-9):** B60L11/18 B60L3/00 B60L3/04 C12R1/225  
G06F1/26 G06F1/28 H01M10/44 H01R24/84 H02J7/00 H02J7/02  
H02J7/14 (Advanced/Invention);  
B60K1/00 C12R1/225 G05D9/00 (Advanced/Non-invention)

**CPC:** B60L2240/34 B60L2240/622 B60L2250/16 Y02T90/16 Y02T90/162  
Y10S903/903 B60L2250/18 H01R24/84 H02J7/0027 H02J7/022  
Y02T10/6269 Y02T10/7005 Y02T10/7055 Y02T10/7088 Y02T90/121  
Y02T90/128 Y02T90/14 Y02T90/163 Y02T90/169 Y04S30/14 Y02T10/7291  
B60L3/04 Y02T90/168 Y04S30/12 C12R1/225 A23V2002/00 B60L1/003

B60L1/02 B60L3/00 B60L3/12 B60L2240/66 B60L2240/70 B60L2240/80  
B60L2250/10 B60L2250/12 B60L2250/30 B60L2260/22 B60L2260/58  
B60L2270/12 Y02E60/721 Y02T10/70 Y02T10/7044 Y02T10/705  
Y02T10/7077 Y02T10/7094 Y04S10/126 A23V2200/3204 A23V2200/324  
B60L53/11 B60L53/16 B60L53/305 B60L53/64 B60L53/65 B60L3/0069  
B60L53/51 B60L53/52 B60L53/30 B60L53/68 B60L50/16 B60L50/52  
B60L53/18 B60L53/63 B60L53/665 B60L58/12 B60L11/1818  
**European:** B60L11/18L4 B60L11/18L4A B60L11/18L7 B60L11/18L7J12  
B60L11/18L7J2 B60L11/18L7J8 B60L3/00F12 B60L3/04 B60L8/00B  
B60L8/00D H01R24/84 H02J7/00C6 H02J7/02B L60L230/16 L60L230/22  
L60L230/24 L60L240/34 L60L240/62B L60L250/16 L60L250/18  
Y02T10/62F12 Y02T10/70B Y02T10/70H6 Y02T10/70J2B Y02T10/70J4  
Y02T90/12B Y02T90/12L Y02T90/14 Y02T90/16 Y02T90/16B2 Y02T90/16D  
Y02T90/16F4 Y04S30/14  
**US:** 1/1 180/65.1 320/107 320/109 320/109S 320/137 320/160 700/293  
700/293P 700/295 700/295S 700/297 700/297P 700/298 700/298S  
903/903 903/903S



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN103959590 A      | 20140730         | CN201180068198     | 20111221         |
| CN103959590 B      | 20170301         | CN201180068198     | 20111221         |
| DE602010043394 D1  | 20170817         | DE201060043394T    | 20100728         |
| EP2281711 A2       | 20110209         | EP20100171122      | 20100728         |
| EP2281711 A3       | 20140430         | EP20100171122      | 20100728         |
| EP2281711 B1       | 20170705         | EP20100171122      | 20100728         |
| EP2656167 A2       | 20131030         | EP20110851425      | 20111221         |
| EP3241703 A2       | 20171108         | EP20170173126      | 20100728         |
| EP3241703 A3       | 20171115         | EP20170173126      | 20100728         |
| US2011029144 AA    | 20110203         | US20090646276      | 20091223         |
| US2011029146 AA    | 20110203         | US20100772519      | 20100503         |
| US2011144823 AA    | 20110616         | US20100974405      | 20101221         |
| US2013063075 AA    | 20130314         | US20120485213      | 20120531         |
| US2015028812 AA    | 20150129         | US20140514102      | 20141014         |
| US8710796 BB       | 20140429         | US20090646276      | 20091223         |
| US8860366 BB       | 20141014         | US20100772519      | 20100503         |
| US8890473 BB       | 20141118         | US20100974405      | 20101221         |
| US9121073 BB       | 20150901         | US20120485213      | 20120531         |
| US9487099 BB       | 20161108         | US20140514102      | 20141014         |
| WO12088223 A2      | 20120628         | WO2011US66380      | 20111221         |
| WO12088223 A3      | 20140410         | WO2011US66380      | 20111221         |
| WO13181478 A2      | 20131205         | WO2013US43503      | 20130531         |
| WO13181478 A3      | 20140220         | WO2013US43503      | 20130531         |

**Priority:**

|                         |                        |                        |
|-------------------------|------------------------|------------------------|
| US20090229104P 20090728 | US20090646275 20091223 | US20090646276 20091223 |
| US20100772519 20100503  | EP20100171122 20100728 | US20100974405 20101221 |
| WO2011US66380 20111221  | US20120485213 20120531 | US20140514102 20141014 |

**Probable Assignee:** SERVICE SOLUTIONS US LLC

**Assignee(s):** (std): BOSCH AUTOMOTIVE SERVICE SOLUTIONS LLC ; MILLER GARRET ; SPX CORP ; MULLER MICHAEL ; MILLER GARRETT ; BOSCH AUTOMOTIVE SERVICE SOLUTIONS INC ; SERVICE SOLUTIONS US LLC ; SERVICE SOLUTIONS U S LLC ; YANKITIS CHARLES K

**Assignee(s):** BOSCH AUTOMOTIVE SERVICE SOLUTIONS INC WARREN ; SPX A DELAWARE CORP CORP ; SPX (A DELAWARE CORPORATION) CORP ; SPX A DELAWARE CORPORATION CORP

**Inventor(s):** (std): MILLER GARRET ; YANKITIS CHARLES K ; MULLER MICHAEL ; SCHUPING MATTHEW C ; FUTKOS DAVID P ; MILLER GARRETT

**Inventor(s):** YANKITIS CHARLES K NEW BALTIMORE ; MULLER MICHAEL HARPER WOODS ; MILLER GARRET OWATONNA

**Agent(s):** EISENFUEHR SPEISER PATENTANWAELTE RECHTSANWAELTE PARTGMBB; FLUTTER PAULA; NGUYEN VAN YEN CHRISTIAN; EIP; BAKER AND HOSTETLER LLP; LARSON P ALAN ET AL; NGUYEN PHONG D ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**7) Family number: 52533522 (US2012309455A)**

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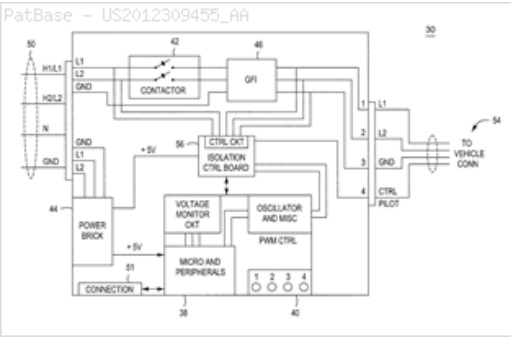
**Title:** SMART PHONE CONTROL AND NOTIFICATION FOR AN ELECTRIC VEHICLE CHARGING STATION

**Abstract:** A system and method for remote control of and notification by an electric vehicle supply equipment (EVSE). The system including a remote device, such as a smart phone, having a software configured to remotely control the EVSE and remotely retrieve and receive information from the EVSE. The smart phone may identify and connect to a communication network, automatically identify the EVSE, connect to the EVSE, and send the EVSE instructions for various functions of the EVSE, including charging, vehicle control, and reporting functions. The EVSE may execute the instructions received and return a confirmation to the remote device. The remote device may present the confirmation to a user.

**Classifications:**

**International (IPC 8-9):** B60L11/00 B60L11/18 B60L50/50 B60L9/00  
B60Q1/00 H04W4/00 (Advanced/Invention)  
**CPC:** B60L11/1824 Y02T90/121 Y02T10/7005 Y02T10/7088 Y02T90/128  
Y02T90/14 Y02T90/16 Y02T90/163 Y02T90/168 Y02T90/169 Y04S30/12

Y04S30/14 B60L2240/72 Y02T10/7291 B60L53/30 B60L53/305 B60L53/65  
B60L53/68 B60L53/60  
US: 320/109 340/425.5 340/439 340/455 455/557



Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN103930297 A      | 20140716         | CN201280037543     | 20120601         |
| CN103930297 B      | 20160706         | CN201280037543     | 20120601         |
| CN105922883 A      | 20160907         | CN201610327301     | 20120601         |
| CN105922883 B      | 20190312         | CN201610327301     | 20120601         |
| EP2714458 A1       | 20140409         | EP20120793766      | 20120601         |
| EP2714458 A4       | 20160309         | EP20120793766      | 20120601         |
| US2012309455 AA    | 20121206         | US20110152813      | 20110603         |
| US2014159660 AA    | 20140612         | US20140149414      | 20140107         |
| US8624719 BB       | 20140107         | US20110152813      | 20110603         |
| US9024744 BB       | 20150505         | US20140149414      | 20140107         |
| WO12167082 A1      | 20121206         | WO2012US40462      | 20120601         |

Priority:

US20110152813 20110603 CN201280037543 20120601 WO2012US40462 20120601  
US20140149414 20140107

Probable Assignee: BOSCH AUTOMOTIVE SERVICE SOLUTIONS LLC

Assignee(s): (std): BOSCH AUTOMOTIVE SERVICE SOLUTIONS INC ; BOSCH AUTOMOTIVE SERVICE SOLUTIONS LLC ; KLOSE LEE ROBERT ; SERVICE SOLUTION U S LLC ; WITTLIFF III WILLIAM ; SERVICE SOLUTIONS U S LLC ; SERVICE SOLUTIONS US LLC

Assignee(s): SPX CORP ; SERVICE SOLUTION US LLC

Inventor(s): (std): KLOSE LEE ROBERT ; WITTLIFF III WILLIAM

Agent(s): NGUYEN VAN YEN CHRISTIAN; BAKER AND HOSTETLER LLP; NGUYEN PHONG D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

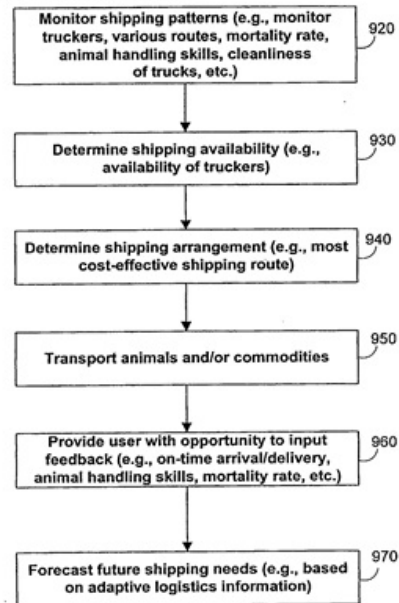
8) Family number: 41578425 (US2008059263A) © PatBase

Title: LIVESTOCK MANAGEMENT SYSTEMS AND METHODS

Abstract: This invention relates to systems and methods for managing livestock, such as cattle, from conception to consumption. More particularly, this invention relates to systems and methods in which users, such as producers, feedlot managers, packers, buyers, sellers, and consumers, are brought together through shared information and improved communication. Users may access one or more applications, tools, and/or systems to increase the value of each animal, monitor and track each animal, and improve the efficiency of their operation.

Classifications:

International (IPC 8-9): A01K29/00 C12Q1/68 G06F17/00 G06F17/30 G06F17/40 G06F17/60 G06F7/06 G06Q10/00 G06Q30/00 G06Q50/00 G08B23/00 (Advanced/Invention)  
CPC: G06Q30/00 G06Q10/063 G06Q10/0631 G06Q10/06315 G06Q10/0635 G06Q10/06375 G06Q10/06395 G06Q10/08 G06Q10/087 G06Q30/018 G06Q30/0201 G06Q30/0203 G06Q40/00 G06Q40/04  
European: G06Q10/063 G06Q10/0631 G06Q10/06315 G06Q10/0635 G06Q10/06375 G06Q10/06395 G06Q10/08 G06Q10/087 G06Q30/00 G06Q30/018 G06Q30/0201 G06Q30/0203 G06Q40/00 G06Q40/04  
US: 1/1 1/1P 119/174 119/51.02 235/375 340/573.3 435/6.11 435/6.12 435/6.14 435/6.17 435/7.1 600/300 705/10 705/10P 705/26 705/26P 705/28 705/317 705/317P 705/35 705/35P 705/37 705/37P 705/37S 705/7 705/7.11 705/7.12 705/7.120P 705/7.13 705/7.25 705/7.250P 705/7.28 705/7.280P 705/7.29 705/7.290P 705/7.32 705/7.320S 705/7.37 705/7.370S 705/7.41 705/7.410S 705/7P 707/104.1 707/999.107 707/999.107S 707/E17.001 707/E17.001S 707/E17.014 707/E17.014S

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2008059263 AA    | 20080306         | US20070977625      | 20071025         |
| US2008059264 AA    | 20080306         | US20070977673      | 20071025         |
| US2008059330 AA    | 20080306         | US20070977623      | 20071025         |
| US2008059534 AA    | 20080306         | US20070977665      | 20071025         |
| US2008065444 AA    | 20080313         | US20070977511      | 20071025         |
| US2008065473 AA    | 20080313         | US20070977509      | 20071025         |
| US2008077481 AA    | 20080327         | US20070977508      | 20071025         |
| US2008097809 AA    | 20080424         | US20070999744      | 20071206         |
| US7603284 BB       | 20091013         | US20070977625      | 20071025         |
| US8019633 BB       | 20110913         | US20070977673      | 20071025         |
| US8433593 BB       | 20130430         | US20070999744      | 20071206         |
| US8642262 BB       | 20140204         | US20070977665      | 20071025         |

**Priority:**

|                        |                        |                        |
|------------------------|------------------------|------------------------|
| US20020071437 20020207 | US20070977508 20071025 | US20070977623 20071025 |
| US20070977625 20071025 | US20070977511 20071025 | US20070977509 20071025 |
| US20070977673 20071025 | US20070977665 20071025 | US20070999744 20071206 |

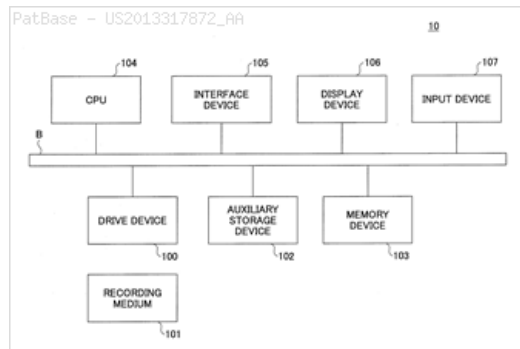
**Probable Assignee:** MWI VETERINARY SUPPLY CO**Assignee(s):** (std): AFIMIWALA KHURSHID A ; BRINK PHILIP C ; CRAIN SCOTT L ; MICRO BEEF TECHNOLOGIES LTD ; MWI VETERINARY SUPPLY CO ; STROMAN RICHARD D ; NIEDECKEN TIMOTHY G ; GIBB JAMES B**Assignee(s):** EMERGE INTERACTIVE INC**Inventor(s):** (std): AFIMIWALA KHURSHID A ; BRINK PHILIP C ; CRAIN SCOTT L ; GIBB JAMES B ; NIEDECKEN TIMOTHY G ; STROMAN RICHARD D**Inventor(s):** AFIMIWALA KHURSHID ; STROMAN RICHARD ; NIEDECKEN TIMOTHY ; GIBB JAMES ; CRAIN SCOTT ; BRINK PHILIP**Agent(s):** KLARQUIST SPARKMAN LLP**9) Family number: 51896331 (US2013317872A)**

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**Title:** AGRICULTURAL WORK SUPPORT METHOD AND APPARATUS

**Abstract:** An agricultural work support method is disclosed. In the agricultural work support method, an advent of an evaluation time of a performed agricultural work task is detected based on a performance time and a calculation method of the evaluation time of an achievement of the agricultural work task, in which a work history storage part stores the performance time for each of multiple agricultural work tasks, and a calculation method storage part stores the performance time as a reference in the calculation method. Then, an instruction of an evaluation work of the achievement pertinent to the agricultural work task, in which the advent of the evaluation time is detected, is output.

**Classifications:****International (IPC 8-9):** G06Q10/06 G06Q50/00  
G06Q50/02 (Advanced/Invention)**CPC:** G06Q50/02 G06Q10/063114**US:** 705/7.15



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN103380439 A      | 20131030         | CN201180068058     | 20110310         |
| CN103380439 B      | 20170912         | CN201180068058     | 20110310         |
| JP2012120689 A1    | 20140707         | JP20130503309T     | 20110310         |
| JP5582245 B1       | 20140903         | JP20130503309T     | 20110310         |
| US2013317872 AA    | 20131128         | US20130960506      | 20130806         |
| WO12120689 A1      | 20120913         | WO2011JP55709      | 20110310         |

#### Priority:

WO2011JP55709 20110310 US20130960506 20130806

**Probable Assignee:** FUJITSU LTD

**Assignee(s):** (std): FUJITSU LTD ; FUJITSUI LTD ; NAKAMICHI KOJI

**Assignee(s):** FUJITSU LIMITED

**Inventor(s):** (std): NAKAMICHI KOJI

**Agent(s):** ITOH TADAHIKO; ITOH TADASHIGE

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**10) Family number: 32087430** (US2005156066A)

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**Title:** IRRIGATION UNIT INCLUDING A POWER GENERATOR

**Abstract:** An irrigation unit (20) for irrigating an area (12) with a fluid (19) from a fluid source (18) includes a housing (200), a nozzle (220), an electronic component (221), and a power generator (230). The nozzle (220) is directly or indirectly secured to the housing (200) and the nozzle (220) is in fluid communication with the fluid source (18) so that fluid (19) from the fluid source (18) is transferred to the nozzle (220). The electronic component (221) is directly or indirectly secured to the housing (200). The power generator (230) generates electrical energy that is transferred to the electronic component (221). The power generator (230) directly transfers at least a portion of the electrical energy to the electronic component (221) of the irrigation unit (20). The electronic component (221) can be a power storage unit (222) for storing electrical energy for use by the irrigation unit (20).

#### Classifications:

**International (IPC 8-9):** A01G25/00 A01G25/09 A01G25/092 A01G25/16 A01G27/00 B05B1/28 B05B15/00 B05B15/04 B05B17/00 B05B17/04 B05B3/00 B05B3/18 F17D5/02 G05B11/01 G05B19/18 G05D7/00 G06F19/00 (Advanced/Invention);

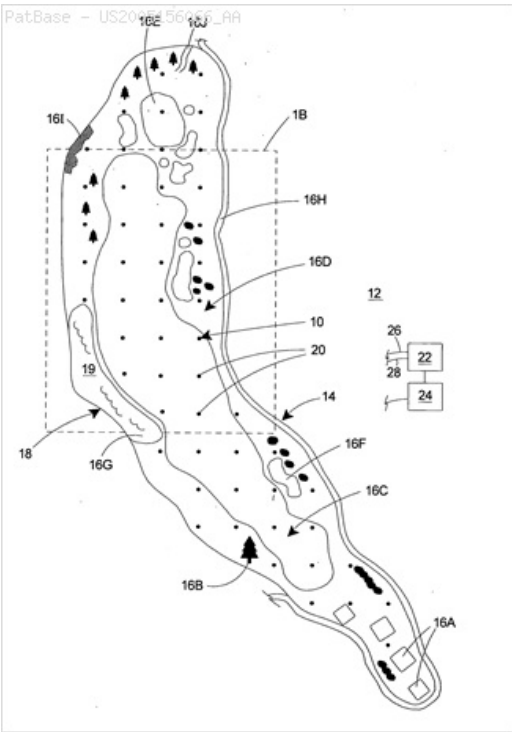
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**International (IPC 1-7):** A01G25/00 B05B15/00 B05B3/00

**CPC:** B05B1/14 B05B3/14 Y10T137/0452 Y10T137/189 A01G25/16

**European:** A01G25/16 B05B3/14 L05B1/14

**US:** 137/15.11 137/78.3 15/250.01 15/256.5 239/1 239/104 239/106 239/11 239/112 239/113 239/114 239/115 239/123 239/165 239/201 239/203 239/207 239/225.1 239/227 239/242 239/243 239/255 239/263 239/263.1 239/289 239/63 239/64 239/67 239/68 239/69 239/70 239/71 239/723 239/73 700/11 700/12 700/14 700/19 700/284 700/56 700/61 702/5



Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2005156066 AA    | 20050721         | US20040762134      | 20040120         |
| US2005156067 AA    | 20050721         | US20050038444      | 20050118         |
| US2005156068 AA    | 20050721         | US20050038763      | 20050118         |
| US2006091245 AA    | 20060504         | US20040978864      | 20041030         |
| US2006102734 AA    | 20060518         | US20040977916      | 20041030         |
| US2006102739 AA    | 20060518         | US20040977915      | 20041030         |
| US2006131441 AA    | 20060622         | US20040021757      | 20041222         |
| US2006131442 AA    | 20060622         | US20040021773      | 20041222         |
| US7097113 BB       | 20060829         | US20040762134      | 20040120         |
| US7191955 BB       | 20070320         | US20040021757      | 20041222         |
| US7349763 BB       | 20080325         | US20040977915      | 20041030         |
| US7458521 BB       | 20081202         | US20040978864      | 20041030         |
| US7617992 BB       | 20091117         | US20040977916      | 20041030         |
| US7708206 BB       | 20100504         | US20040021773      | 20041222         |
| US7822511 BB       | 20101026         | US20050038763      | 20050118         |
| US8443822 BB       | 20130521         | US20050038444      | 20050118         |
| WO05069988 A2      | 20050804         | WO2005US02173      | 20050119         |
| WO05069988 A3      | 20060119         | WO2005US02173      | 20050119         |

Priority:

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| US20040762134 20040120 | US20040977915 20041030 | US20040978864 20041030 |
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| US20040021757 20041222 | US20040021757 20041222 | US20040021773 20041222 |
| US20050038444 20050118 | US20050038763 20050118 |                        |

Probable Assignee: IVANS NORMAN

Assignee(s): (std): IVANS NORMAN

Inventor(s): (std): IVANS NORMAN

Agent(s): LAW OFFICE OF STEVEN G ROEDER; THE LAW OFFICE OF STEVEN G ROEDER; TH LAW OFFICE OF STEVEN G ROEDER; STEVEN G; JAMES P; BRODER JAMES P; ROEDER STEVEN G; ROEDER AND BRODER LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

11) Family number: 44898672 (US2010094481A)

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Title: HIGH INTEGRITY COORDINATION SYSTEM FOR MULTIPLE OFF-ROAD VEHICLES

Abstract: The illustrative embodiments provide a method and apparatus for controlling and coordinating multiple vehicles. In one illustrative embodiment, machine behaviors are assigned to multiple vehicles performing a task. The vehicles are coordinated to perform the task using the assigned behaviors and a number of signals received from other vehicles and the environment during performance of the task. In another illustrative embodiment, a role is identified for each vehicle in a group of vehicles. A number of machine behaviors are assigned to each vehicle depending upon the identified role for the vehicle. The machine behaviors are selected from coordinating machine behaviors stored in a behavior library. Each vehicle is then coordinated to perform the task

according to the role and machine behaviors assigned.

**Classifications:**

**International (IPC 8-9):** G05B13/02 G05D1/02 G06F17/00

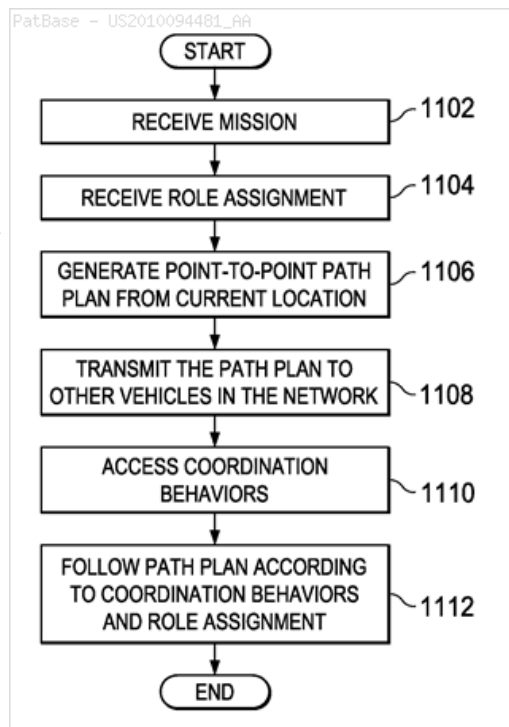
G06N5/04 (Advanced/Invention);

G06F17/00 (Core/Invention)

**CPC:** G05D1/0088 G05D1/0295 G05D1/0219 G05D1/024 G05D1/0242  
G05D1/0251 G05D1/0255 G05D1/0257 G05D1/0272 G05D1/0274  
G05D1/0278 G05D2201/0201 G05D2201/0202 A01D34/008 A01D41/127  
A01D75/185

**European:** G05D1/02E20F4 S05D1/02E10 S05D1/02E14D  
S05D1/02E14M S05D1/02E16B S05D1/02E3F S05D1/02E6D2  
S05D1/02E6N S05D1/02E6V4 S05D1/02E8 S05D201/0201 S05D201/0202

**US:** 701/1 701/1P 701/29.1 701/29.3 701/482 701/50



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP2177964 A2       | 20100421         | EP20090169591      | 20090907         |
| EP2177964 A3       | 20110629         | EP20090169591      | 20090907         |
| US2010094481 AA    | 20100415         | US20080251619      | 20081015         |
| US8639408 BB       | 20140128         | US20080251619      | 20081015         |

**Priority:**

US20080251619 20081015

**Probable Assignee:** DEERE AND CO

**Assignee(s):** (std): ANDERSON NOEL WAYNE ; DEERE AND CO

**Assignee(s):** DEERE AND COMPANY

**Inventor(s):** (std): ANDERSON NOEL WAYNE

**Agent(s):** HOLST SOENKE; DUKE W YEE; YEE AND ASSOCIATES PC

**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO  
RS SE SI SK SM TR

**12) Family number: 47337650** (US2010268390A)

© PatBase

**Title:** METHOD FOR PROVIDING AN APPLICATION TO PLANTS

**Abstract:** Therefore, the illustrative embodiments provide a computer implemented method and system for providing an application of a resource to plants. A plurality of per plant prescriptions for a plurality of plants are received and a source is selected to fulfill the plurality of per plant prescriptions to form a selected source. Movement of a mobile utility vehicle is controlled to the selected source, the resource is obtained, and movement of the mobile utility vehicle is controlled to each plant in the plurality of plants. The resource is applied from the mobile utility vehicle to each plant according to the per plant prescription.

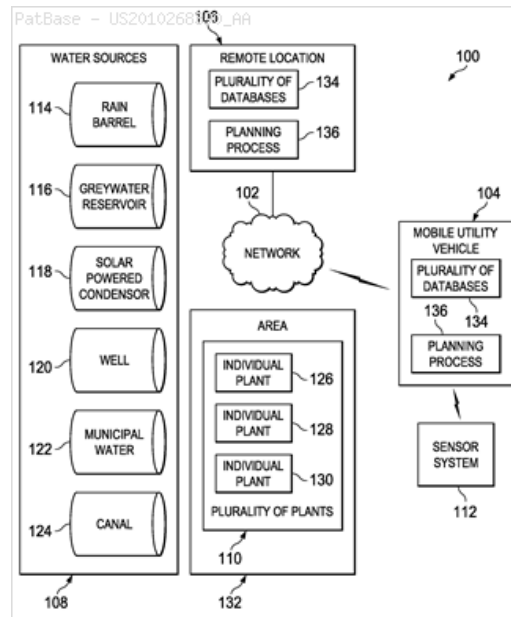
**Classifications:**

**International (IPC 8-9):** A01C23/00 A01G A01G1/00 A01G25/00  
A01G25/16 A01G27/00 A01G9/26 B05B3/00 B05B9/03 G05D11/00  
G05D7/00 G05D7/06 G06N5/02 G06Q10/00 (Advanced/Invention)

**CPC:** A01G25/167 G06Q10/06

**European:** A01G25/16D G06Q10/06

**US:** 239/146 239/148 239/225.1 340/5.2 340/5.200S 47/58.10RS  
47/58.1R 56/10.2A 56/10.2D 700/283 700/284 700/284P 701/50 706/47  
706/47S



# Family:

| Publication number                                   | Publication date | Application number | Application date |
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| <span style="color: red;">■</span> AU2010201510 AA   | 20101104         | AU20100201510      | 20100415         |
| <span style="color: red;">■</span> CN101869047 A     | 20101027         | CN201010145267     | 20100413         |
| <span style="color: red;">■</span> EP2244217 A1      | 20101027         | EP20100160619      | 20100421         |
| <span style="color: green;">■</span> IL205121 A0     | 20101230         | IL20100205121      | 20100415         |
| <span style="color: green;">■</span> IN01267MU2010 A | 20120810         | IN2010MU01267      | 20100419         |
| <span style="color: green;">■</span> US2010268390 AA | 20101021         | US20090427051      | 20090421         |
| <span style="color: green;">■</span> US8224494 BB    | 20120717         | US20090427051      | 20090421         |
| <span style="color: green;">■</span> US8437879 BB    | 20130507         | US20090427051      | 20090421         |

# Priority:

US20090427051 20090421

**Probable Assignee:** DEERE AND CO

**Assignee(s):** (std): ANDERSON NOEL WAYNE ; DEERE AND CO

**Assignee(s):** DEERE AND COMPANY

**Inventor(s):** (std): ANDERSON NOEL WAYNE ; WAYNE ANDERSON NOEL

**Inventor(s):** NOEL WAYNE ANDERSON

**Agent(s):** DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; MUENCH CHRISTIAN; DUKE W YEE; YEE AND ASSOCIATES PC; JEREMY J; YEE AND ASSOCIATES P C

**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

**13) Family number: 55662241** (US2014025228A)

© PatBase

**Title:** MISSION RE-PLANNING FOR COORDINATED MULTIVEHICLE TASK ALLOCATION

**Abstract:** A system and methods for mission re-planning are presented. Vehicles are monitored in real-time, and an incapacitated vehicle from among the vehicles that performs an incomplete task is detected. A remaining coverage set comprising a remaining coverage area for each of the vehicles is determined. A travel distance from a task completion location of each of the vehicles to a stopped point of the incapacitated vehicle is calculated to provide a travel set. An extra coverage set is determined based on the travel set and the remaining coverage set, and an incomplete coverage area for the incomplete task is calculated. The extra coverage set is compared to the incomplete coverage area and the remaining coverage area to provide a sufficiency list, and an assigned vehicle is selected from the vehicles based on the sufficiency list.

## Classifications:

**International (IPC 8-9):** F41H13/00 G01D1/00 G05D1/00 G05D1/02

G05D1/10 G05D3/12 G06Q10/04 (Advanced/Invention)

**CPC:** G05D1/104 G05D1/027 G05D1/0088 G06Q10/047

**US:** 701/2 901/1

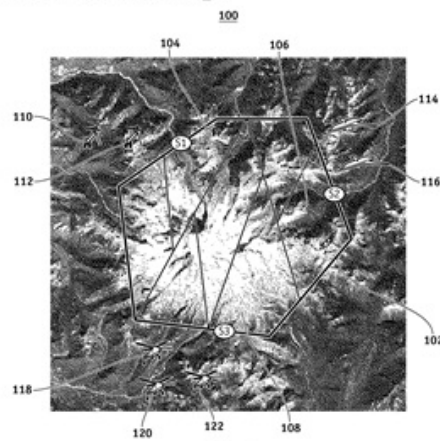


FIG. 1

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN103576698 A      | 20140212         | CN201310303289     | 20130718         |
| CN103576698 B      | 20180925         | CN201310303289     | 20130718         |
| EP2688016 A1       | 20140122         | EP20130169024      | 20130523         |
| JP2014059860 A2    | 20140403         | JP20130148182      | 20130717         |
| JP6397608 B2       | 20180926         | JP20130148182      | 20130717         |
| US2014025228 AA    | 20140123         | US20120551616      | 20120718         |
| US9651950 BB       | 20170516         | US20120551616      | 20120718         |

**Priority:**

US20120551616 20120718

**Probable Assignee:** BOEING CO**Assignee(s):** (std): BOEING CO ; CHEN CAISHUN ; JANG JUNG SOON ; LIM MENG HIOT ; VIAN JOHN L ; VAVRINA MATTHEW A**Assignee(s):** NANYANG TECHNOLOGICAL UNIV**Inventor(s):** (std): CHEN CAISHUN ; LIM MENG HIOT ; JANG JUNG SOON ; VIAN JOHN L ; VAVRINA MATTHEW A ; JUNG SOON JANG ; MENG HIOT LIM ; MATTHEW A VAVRINA ; CAISHUN CHEN ; JOHN L VIAN**Inventor(s):** JOHN LVIAN**Agent(s):** SHIPP NICHOLAS; MCDONNELL BOEHNEN HULBERT AND BERGHOFF LLP**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR**14) Family number: 12441348** (US6347253B)

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**Title:** Control system for executing a task instruction by performing distributed processing via a number of modules

**Abstract:** A control system for executing task instructions, comprising a higher-order module for making an inquiry as to whether or not a task instruction can be executed, and a lower-order module for determining whether or not the task instruction can be executed, in response to the inquiry made by the higher-order module, the higher-order module including a task instruction decomposition section for decomposing the task instruction into a sequence of task instructions executable by the lower-order module, when the task instruction is inexecutable by the lower-order module, and further including a task instruction allocation section for allocating an executable task instruction to the lower-order module.

**Classifications:**

**International (IPC 8-9):** B23Q41/00 B25J13/00 B65G61/00 G05B15/02 G05B19/02 G05B19/414 G05B19/418 G06Q50/00 G06Q50/04 (Advanced/Invention);

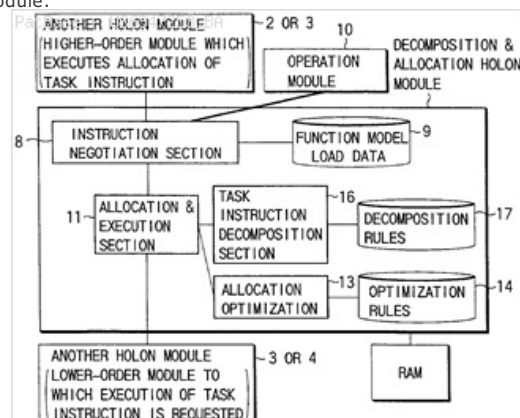
B23Q41/00 (Advanced/Non-invention);  
B23Q41/00 B25J13/00 B65G61/00 G05B15/02 G05B19/02 G05B19/414 G05B19/418 G06Q50/00 (Core/Invention);  
B23Q41/00 (Core/Non-invention)

**International (IPC 1-7):** B23Q41/00 B25J13/00 G05B13/02 G05B15/02 G05B19/02 G05B19/418 G06F17/60

**CPC:** G05B15/02 G05B19/4142 G05B2219/33055 Y02P90/30 Y02P90/12

**European:** G05B15/02 G05B19/414K S05B219/33055

**US:** 700/173 700/2 700/20 700/250 700/28 700/30 700/31 709/100 709/105 718/100 718/105

**Family:**

| Publication number | Publication date | Application number | Application date |
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|               |          |               |          |
|---------------|----------|---------------|----------|
| JP11039018 A2 | 19990212 | JP19980120739 | 19980430 |
| JP3643478 B2  | 20050427 | JP19980120739 | 19980430 |
| US6347253 BA  | 20020212 | US19990264002 | 19990308 |

**Priority:**

JP19970128669 19970519 JP19980120739 19980430

**Probable Assignee:** TOSHIBA KK

**Assignee(s):** (std): TOSHIBA CORP ; TOSHIBA KK

**Assignee(s):** KABUSHIKI KAISHA TOSHIBA

**Inventor(s):** (std): FUJITA NOBUYUKI ; KOHNO YOSHIKI ; KONO YOSHIKI

**15) Family number: 24017608 (US2004122561A)**

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**Title:** VEHICLE SHARING SYSTEM

**Abstract:** When a staff member reports a start of daily work from a portable terminal to a control center, a staff member controlling section which is included in the controlling section starts to handle the staff member. Also, a motor vehicle controlling section which is included in the controlling section acknowledges a maintenance condition of a shared motor vehicle which is recorded in a motor vehicle master and a port master and a partiality condition of the motor vehicles in each port so as to detect a staff member's job which is supposed to be done by the staff member and a port position in which the job is necessary to be done by the staff member. The staff member controlling section selects a staff member who can arrive at the port first in which a new job occurs according to the estimated job completion time at which the staff member completes the present job. A job notifying section which is included in the controlling section notifies the job to the portable terminal of the staff member. By doing this, it is possible to provide a motor vehicle sharing system in which a staff member can be allocated to the staff member's job such as maintenance and reallocation of the motor vehicle efficiently.

**Classifications:**

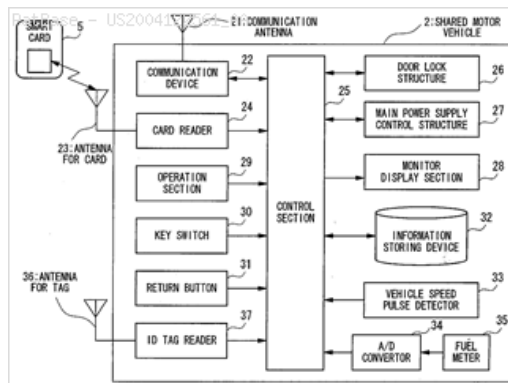
**International (IPC 8-9):** G06F19/00 G06Q10/00 G06Q10/04 G06Q10/06 G06Q10/10 G06Q50/00 G06Q50/30 G07C5/00 G07C5/08 G08G1/00 G08G1/123 (Advanced/Invention)

**International (IPC 1-7):** G06F17/00 G06F17/60 G06F19/00 G08G1/00

**CPC:** G06Q10/06 G07C5/008 G07C5/085 G08G1/20 G08G1/207

**European:** G06Q10/06 G07C5/00T G07C5/08R2 G08G1/20 G08G1/20C

**US:** 701/1 701/117 701/117S 701/1P



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| JP2002304498 A2    | 20021018         | JP20010105077      | 20010403         |
| JP4703882 B2       | 20110615         | JP20010105077      | 20010403         |
| US2004122561 AA    | 20040624         | US20040472196      | 20040126         |
| WO02082337 A1      | 20021017         | WO2002JP03198      | 20020329         |

**Priority:**

JP20010105077 20010403 WO2002JP03198 20020329

**Probable Assignee:** HONDA GIKEN KOGYO KK

**Assignee(s):** (std): HONDA MOTOR CO LTD ; SHIMIZU TOMOHIDE ; KOKUBU MAMORU ; UEHARA YUJI ; FUJINUMA MICHIO

**Assignee(s):** HONDA GIKEN KOGYO KABUSHIKI KAISHA ; HONDA GIKEN KOGYO KK

**Inventor(s):** (std): FUJINUMA MICHIO ; SHIMIZU TOMOHIDE ; KOKUBU MAMORU ; UEHARA YUJI

**Designated states:** SG US

**16) Family number: 24082214 (US6330617B)**

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**Title:** SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR DATA CONVERSION IN A COMPUTER NETWORK

**Abstract:** Conversion of a data in a variable field message to a fixed format message. The variable field message has a varying length and fields of varying types of data. The corresponding fixed format message has fields of a fixed data type and length, which facilitates parsing and processing data from the variable field message. Customers for the data conversion or other processing are load balanced among multiple servers sharing load level information.

**Classifications:**

**International (IPC 8-9):** G06F13/00 G06F15/177 G06F17/30 G06F9/50 G06Q10/02 H04L29/06 (Advanced/Invention);

G06F13/00 G06Q50/00 H04L29/06 (Advanced/Non-invention);

G06F13/00 G06F15/16 G06F17/30 G06F9/46 G06Q50/00

H04L29/06 (Core/Invention)

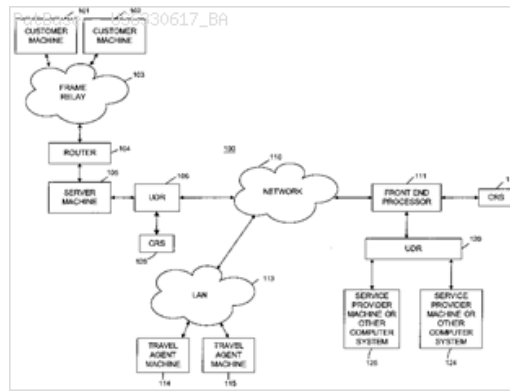
**International (IPC 1-7):** G06F13/00 G06F15/16 G06F15/177 G06F17/30

G06F17/60 G06F9/46 H04L29/06

**CPC:** G06F16/258 G06F9/505 G06Q10/02

**European:** G06F17/30S5V G06F9/50A6L G06Q10/02

**US:** 705/5 707/573 707/E17.006 709/203 709/226 709/241 709/246



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU199927881 A1     | 19990915         | AU19990027881      | 19990225         |
| JP2002505482 T2    | 20020219         | JP20000533836T     | 19990225         |
| US6330617 BA       | 20011211         | US19980031671      | 19980227         |
| US6470394 BA       | 20021022         | US20000686998      | 20001012         |
| WO9944155 A2       | 19990902         | WO1999US04070      | 19990225         |
| WO9944155 A3       | 20000309         | WO1999US04070      | 19990225         |

#### Priority:

US19980031671 19980227 WO1999US04070 19990225 US20000686998 20001012

**Probable Assignee:** SABRE GLBL INC

**Assignee(s):** (std): SABRE INC ; SABRE GROUP INC

**Assignee(s):** THE SABRE GROUP INC ; WELLS FARGO BANK NATIONAL ASSOCIATION ; WELLS FARGO BANK NATIONAL ASSOCIATION COLLATERAL AGENT AS ; SABRE HOLDINGS CORP ; SITE59COM LLC ; TVL LP ; BANK OF AMERICA NA ; DEUTSCHE BANK AG ; DEUTSCHE BANK NEW YORK BRANCH ADMINISTRATIVE AGENT ; DEUTSCHE BANK NEW YORK BRANCH ADMINISTRATIVE AGENT AG AS ; GETTHERE LP ; SABRE GLBL INC

**Inventor(s):** (std): AKSHAYAKUMAR SUDHA ; BAMFORTH JOHN ; BUCKLEY KEVIN ; HUBER GLENN ; KARRA SRINIVAS ; SHENOY ARAVINDA ; THORPE III KENNETH P ; THORPE KENNETH P III

**Inventor(s):** THORPE KENNETH P ; SRINIVAS KARRA ; SUDHA AKSHAYAKUMAR ; KENNETH P THORPE III ; KEVIN BUCKLEY ; JOHN BAMFORTH ; GLENN HUBER ; ARAVINDA SHENOY

**Agent(s):** TSURUTA JUNICHI ; NISHIYAMA MASAYA ; HIGUCHI SOTOJI ; ISHIDA TAKASHI

**Designated states:** AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

#### 17) Family number: 32616442 (US2006074560A)

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**Title:** METHOD AND SYSTEM OF EVALUATING PERFORMANCE OF A CROP

**Abstract:** A method and system of evaluating crop performance facilitates characterization of the environmental impact of a geographic region or areas within the region for growing plant-life. Environmental measurements are obtained. The environmental measurements are associated with a geographic region. Each environmental measurement includes at least one of soil data and weather data. Respective location data is obtained. The location data is associated with corresponding environmental measurements. An estimated performance characteristic is determined for a particular crop planted in the geographic region based on the obtained environmental measurements and respective location data. Contours are established for one or more uniform performance areas with generally uniform performance characteristic within the geographic region by applying a decision-tree analysis to the obtained environmental measurements.

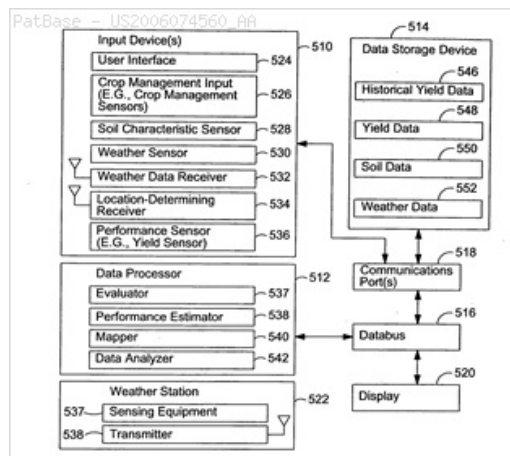
#### Classifications:

**International (IPC 8-9):** G06F169/00 G06F17/60 G06F19/00 G06Q50/00 (Advanced/Invention); G06F19/00 (Core/Invention)

**CPC:** G06Q10/00 G06Q50/02 A01B79/005 G06Q10/04

**European:** A01B79/00P G06Q10/00 G06Q10/04 G06Q50/02

**US:** 702/2 702/5 702/5P 705/10



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2006074560 AA    | 20060406         | US20050258582      | 20051025         |
| US6999877 BA       | 20060214         | US20030744418      | 20031223         |
| US7047133 BA       | 20060516         | US20030744307      | 20031223         |
| US7047135 BB       | 20060516         | US20050258582      | 20051025         |
| US7184892 BA       | 20070227         | US20030744419      | 20031223         |

**Priority:**

US20030444592P 20030131      US20030744307 20031223      US20030744418 20031223  
US20030744419 20031223      US20050258582 20051025

**Probable Assignee:** DEERE AND CO

**Assignee(s):** (std): DYER JAMES S ; HALTERMAN JERRY R ; HUNNER GERHARD J ; MUEHLBACH GEORGE B ; DEERE AND CO

**Assignee(s):** DEERE AND COMPANY

**Inventor(s):** (std): DYER JAMES S ; DYER JAMES SCOTT ; HALTERMAN JERRY R ; HALTERMAN JERRY RAY ; HUNNER GERHARD J ; HUNNER GERHARD JOSEF ; MUEHLBACH GEORGE B ; MUEHLBACH GEORGE BAILEY

**Inventor(s):** MUEHLBACH GEORGE ; HUNNER GERHARD ; HALTERMAN JERRY ; DYER JAMES

**Agent(s):** DEERE AND COMPANY; DEERE AND CO

**18) Family number: 32765346** (US2006070078A)

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**Title:** SYSTEMS AND METHODS TO ALLOCATE APPLICATION TASKS TO A POOL OF PROCESSING MACHINES

**Abstract:** Systems and methods are provided to allocate application tasks to a pool of processing machines. According to some embodiments, a requestor generates a scope request including an indication of a number of compute units to be reserved. The requestor also provides an application request associated with the scope. A subset of available processing machines may then be allocated to the scope, and the application request is divided into a number of different tasks. Each task may then be assigned to a processing machine that has been allocated to the application request. According to some embodiments, each task is associated with a deadline. Moreover, according to some embodiments an overall cost is determined and then allocated to the requestor based on the number of compute units that were reserved for the scope.

**Classifications:**

**International (IPC 8-9):** G06F15/16 G06F15/173 G06F21/00 G06F9/46

G06F9/50 H04L29/08 (Advanced/Invention);

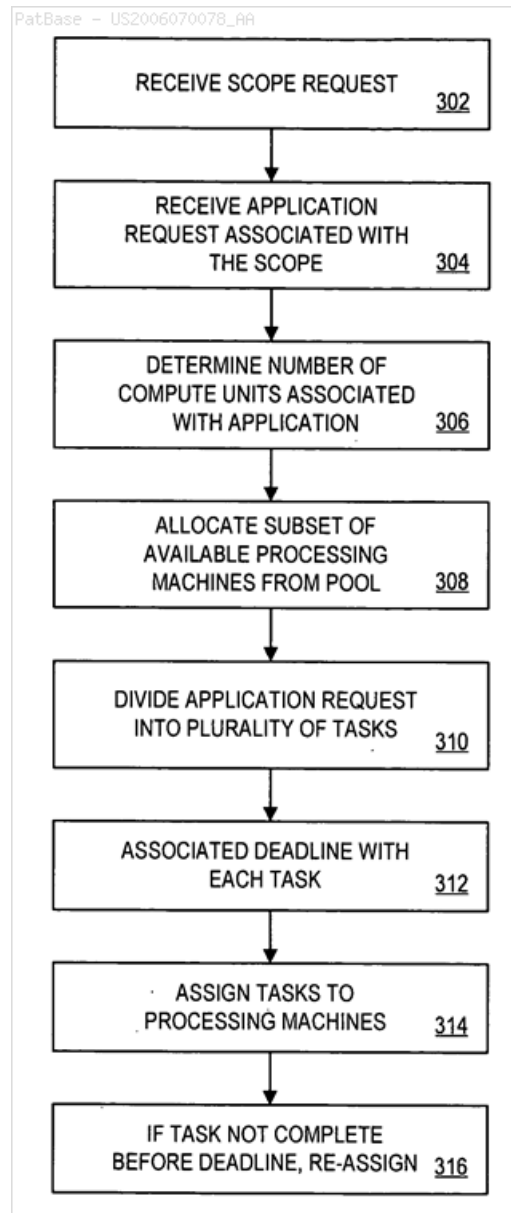
G06F15/16 G06F9/46 (Core/Invention)

**CPC:** G06F9/50 G06F9/5027 G06F2209/5011 G06F2209/5014

G06F2209/5017 H04L67/10

**European:** G06F9/50A6 H04L29/08N9

**US:** 705/52 709/201 709/201S 709/226 709/226S 718/104 718/104P 718/106

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2006070078 AA    | 20060330         | US20050208991      | 20050822         |
| US2013305256 AA    | 20131114         | US20130867881      | 20130422         |
| US8429660 BB       | 20130423         | US20050208991      | 20050822         |
| US9558037 BB       | 20170131         | US20130867881      | 20130422         |

**Priority:**

US20040603612P 20040823      US20050208991 20050822      US20130867881 20130422

**Probable Assignee:** GOLDMAN SACHS AND CO LLC

**Assignee(s):** (std): BYRON MARRY D ; BYRON MARY D ; DWECK JAY S ; FELLOWS MICHAEL ; GOLDMAN SACHS AND CO ; RICHARD DAVID G ; MORRISSEY MARK T

**Assignee(s):** GOLDMAN SACHS AND CO LLC

**Inventor(s):** (std): DWECK JAY S ; FELLOWS MICHAEL ; MORRISSEY MARK T ; BYRON MARRY D ; BYRON MARY D ; MORRISSEY MARK T ; RICHARD DAVID G

**Inventor(s):** BYRON MARRY ; RICHARD DAVID ; DWECK JAY ; MORRISSEY MARK

**Agent(s):** BUCKLEY MASCHOFF AND TALWALKAR LLC ; PERKINS COIE LLP

**19) Family number: 33369705** (US2006212875A)

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**Title:** METHOD AND SYSTEM FOR TASK MAPPING TO ITERATIVELY IMPROVE TASK ASSIGNMENT IN A HETEROGENEOUS COMPUTING SYSTEM

**Abstract:** Method and system aspects for mapping tasks to iteratively improve task assignment in a heterogeneous computing (HC) system include identifying a current machine that defines a makespan in the HC system. Further included is the reassigning

of at least one task from the current machine to at least one alternate machine in the HC system according to a predefined reassignment constraint. Reassigning also includes reassigning the at least one task when the at least one alternate machine can perform the at least one task in addition to previously assigned work while finishing in less time than the time of the makespan reduced by time required for the task being reassigned.

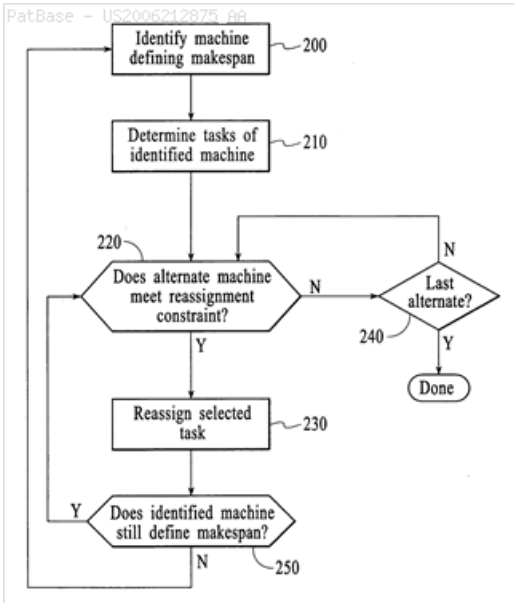
**Classifications:**

**International (IPC 8-9):** G06F3/00 G06F9/46 (Advanced/Invention); G06F9/46 (Core/Invention)

**CPC:** G06F2209/506 G06F9/5038 G06F9/4856

**European:** G06F9/48C4P2 G06F9/50A6E

**US:** 718/107 718/107P 718/318 719/310 719/318



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2006212875 AA    | 20060921         | US20050083384      | 20050316         |
| US8589944 BB       | 20131119         | US20050083384      | 20050316         |

**Priority:**

US20050083384 20050316

**Probable Assignee:** RICOH CO LTD

**Assignee(s):** (std): HALLER MICHAEL ; IBM ; MITCHELL JOAN L ; RIJAVEC NENAD ; RICOH PRODUCTION PRINT SOLUTIONS ; SMITH II JAMES T

**Assignee(s):** RICOH CO LTD ; RICOH PRODUCTION PRINT SOLUTIONS LLC ; INFOPRINT SOLUTIONS CO ; INFOPRINT SOLUTIONS CO LLC A DELAWARE CORP ; INT BUSINESS MACHINES CORP

**Inventor(s):** (std): MITCHELL JOAN L ; RIJAVEC NENAD ; SMITH II JAMES T ; HALLER MICHAEL ; SMITH JAMES T II

**Inventor(s):** SMITH JAMES TII ; MITCHELL JOAN ; SMITH JAMES ; SMITH JAMES T

**Agent(s):** SAWYER LAW GROUP LLP; DUFT BORNSSEN AND FETTIG LLP

**20) Family number: 34556784** (US2009313215A) © PatBase

**Title:** SYSTEM FOR INTEGRATED UTILIZATION OF DATA TO IDENTIFY, CHARACTERIZE, AND SUPPORT SUCCESSFUL FARM AND LAND USE OPERATIONS

**Abstract:** Computer configurations, search processors (2), software, and methods of viewing and analyzing information regarding agriculture or land use automatically located relationally-linked agronomic entities with both real (18) and virtual (8) displays. Relational linking exist through broad assessment of commonality information with fuzzy logic heuristics. Dynamic link presentation (6) can exist with congregated and hierarchical information displays (29) such as at the farm level, at a location level, at a physically aggregated parcel level with hierarchical display of farms or agronomic entity ownership, management, organization, and crop usages that afford users an unprecedented series of views into the businesses of land use, food production, and resource conservation. A meta-syntactic agronomic information generator (31) can facilitate imputed information through the integration of multiple databases (32). Predictive and application-specific configurations can allow at-a-glance understanding of agronomic organizations and agronomic decision-making to see where to most optimally devote resources for higher success or efficiency.

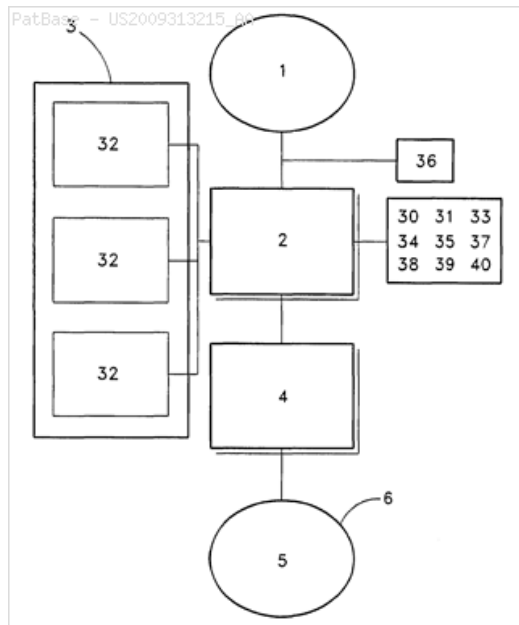
**Classifications:**

**International (IPC 8-9):** G06F17/30 G06F19/00 G06F7/00 G06N7/02 G06Q10/00 (Advanced/Invention)

**CPC:** G06Q10/00 G06Q10/0637

**European:** G06Q10/00 G06Q10/0637

**US:** 1/1 1/1P 705/7 705/7.36 705/7.360S 705/7S 706/52 706/52S 707/102 707/3 707/705 707/758 707/776 707/999.003 707/999.003S 707/999.102 707/999.102S 707/E17.014 707/E17.014S 707/E17.018 707/E17.018S 707/E17.048 707/E17.048S 707/E17.108 707/E17.108S



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2009313215 AA    | 20091217         | US20060096167      | 20061205         |
| US7991754 BB       | 20110802         | US20060096167      | 20061205         |
| WO07067579 A2      | 20070614         | WO2006US46465      | 20061205         |
| WO07067579 A3      | 20090514         | WO2006US46465      | 20061205         |

**Priority:**

US20050742943P 20051205      US20060096167 20061205      WO2006US46465 20061205

**Probable Assignee:** ONELMAGE LLC

**Assignee(s):** (std): MAIZEL MARGARET STEWART ; ONEIMAGE LLC ; THOEN WILLIAM L

**Assignee(s):** VISUAL FARMS LLC ; ONELMAGE LLC

**Inventor(s):** (std): THOEN WILLIAM L ; MAIZEL MARGARET STEWART

**Agent(s):** SANTANGELO LAW OFFICES PC

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**21) Family number: 49890135 (US2011270723A)**

© PatBase

**Title:** DYNAMICALLY TRIGGERED APPLICATION CONFIGURATION

**Abstract:** Dynamically triggered application configuration may be provided. An application trigger may be created and associated with a work area. A characteristic may be associated with a work implement. The work implement may be determined to be located in the work area and, if the characteristic of the work implement satisfies a condition associated with the application trigger, an application configuration may be transmitted to the work implement.

**Classifications:**

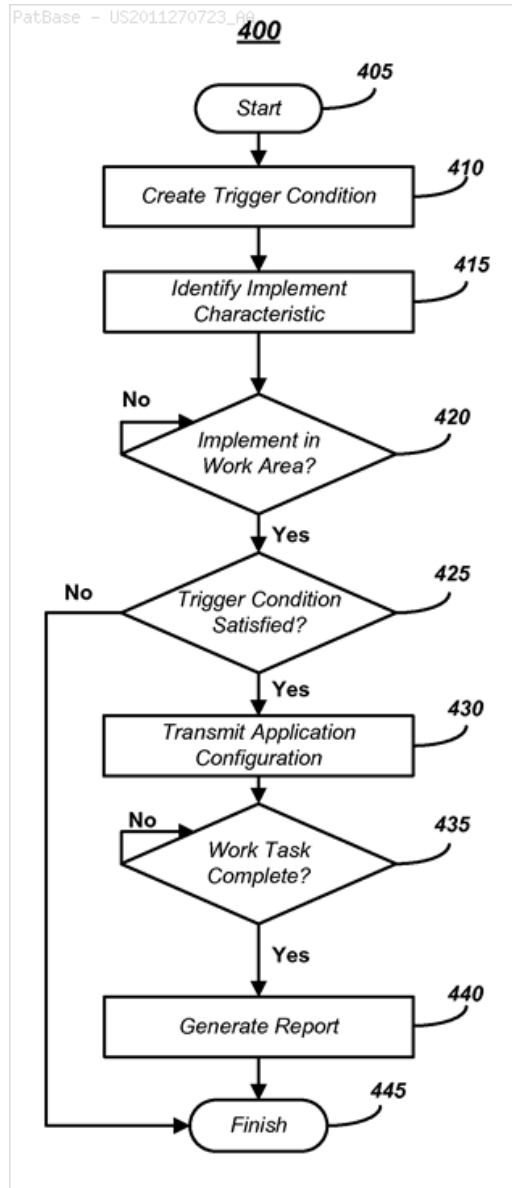
**International (IPC 8-9):** G06F17/00 G06F17/40 G06F19/00 G06F7/00 G06F9/46 G06F9/48 G06Q10/06 G06Q30/00 G06Q50/00 G06Q50/02 (Advanced/Invention)

**CPC:** G06Q10/087 G06Q50/06 G06Q30/04 G06Q10/06 G06Q50/02

**European:** G06Q10/06 G06Q10/087 G06Q10/08E G06Q30/04

G06Q50/02 G06Q50/06

**US:** 701/50 701/50S 702/187 702/187S 702/23 702/23S 705/34 705/34P 705/412 705/412P 718/100 718/100S

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP2564370 A1       | 20130306         | EP20110720913      | 20110428         |
| US2011270723 AA    | 20111103         | US20100915792      | 20101029         |
| US2011270724 AA    | 20111103         | US20100915803      | 20101029         |
| US2011270783 AA    | 20111103         | US20100915777      | 20101029         |
| WO11137251 A1      | 20111103         | WO2011US34349      | 20110428         |

**Priority:**

|                         |                         |                         |
|-------------------------|-------------------------|-------------------------|
| US20100330002P 20100430 | US20100330015P 20100430 | US20100330026P 20100430 |
| US20100915777 20101029  | US20100915792 20101029  | US20100915803 20101029  |
| WO2011US34349 20110428  |                         |                         |

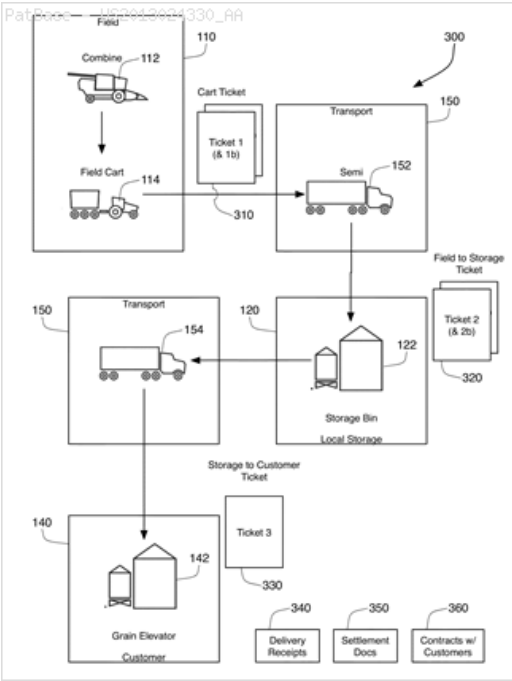
**Probable Assignee:** AGCO**Assignee(s):** (std): AGCO CORP ; O NEIL CHRISTOPHER ; WAGGONER ROBERT**Assignee(s):** AGCO**Inventor(s):** (std): O NEIL CHRISTOPHER ; O NEIL CHRISTOPHER BURTON ; WAGGONER ROBERT ; WAGGONER ROBERT J**Inventor(s):** O'NEIL CHRISTOPHER BURTON**Agent(s):** AGCO Intellectual Property Department; LAFFERTY WILLIAM BROOKOVER ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**Abstract:** A system and method is presented for gathering data concerning harvests. Data tickets are generated when the harvest is received at a point of origination (i.e., the field), local storage, processing, or a customer location. Data tickets can be manually generated using apps running on mobile devices. Users of the mobile devices input the data tickets when harvest is received at these locations. Data tickets are transmitted to a remote server over a wide area network. Analysis of the data tickets is possible through a web interface to the remote server. Beacons that identify various equipment or locations can be used to trigger the automatic generation of data tickets.

**Classifications:**

**International (IPC 8-9):** G01C21/00 G01S5/00 G06F13/38 G06Q10/00 G06Q10/06 G06Q10/08 G06Q50/02 G1C21/00 G6Q10/00 (Advanced/Invention)  
**CPC:** G06Q10/063 G06Q10/087 G01S5/0027 G01S5/0072 G06Q10/0875 G06Q10/063114 G06Q50/02 G06Q10/08  
**US:** 701/1 705/28 705/29 705/7.15



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2014234979 AA    | 20151105         | AU20140234979      | 20140313         |
| BR112015023749 A2  | 20170718         | BR20151123749      | 20140313         |
| CA2911502 AA       | 20151105         | CA20142911502      | 20140313         |
| EP2973254 A1       | 20160120         | EP20140770121      | 20140313         |
| EP2973254 A4       | 20161019         | EP20140770121      | 20140313         |
| US2013024330 AA    | 20130124         | US20120551916      | 20120718         |
| US2013304614 AA    | 20131114         | US20130832661      | 20130315         |
| US2014122147 AA    | 20140501         | US20130889736      | 20130508         |
| US2015186838 AA    | 20150702         | US20140559991      | 20141204         |
| US2017178049 AA    | 20170622         | US20170453934      | 20170309         |
| US2018144293 AA    | 20180524         | US20180875083      | 20180119         |
| US2018341916 AA    | 20181129         | US20180874463      | 20180118         |
| US9607342 BB       | 20170328         | US20130889736      | 20130508         |
| US9875457 BB       | 20180123         | US20140559991      | 20141204         |
| US9881278 BB       | 20180130         | US20130832661      | 20130315         |
| WO14151398 A1      | 20140925         | WO2014US25649      | 20140313         |

**Priority:**

|                |          |               |          |               |          |
|----------------|----------|---------------|----------|---------------|----------|
| US20110508819P | 20110718 | US20120551916 | 20120718 | US20130832661 | 20130315 |
| US20130889736  | 20130508 | WO2014US25649 | 20140313 | US20140559991 | 20141204 |
| US20170453934  | 20170309 | US20180874463 | 20180118 | US20180875083 | 20180119 |

**Probable Assignee:** CONSERVIS CORP

**Assignee(s):** (std): BORMAN MICHAEL ; CHRISTIE PATRICK ; CHRISTIE PATRICK P ; CONSERVIS CORP ; FAISON CHUCK ; TEVIS JOE ; SHILTS MATTHEW ; LARSON PAUL

**Inventor(s):** (std): CHRISTIE PATRICK P ; BORMAN MICHAEL ; TEVIS JOE ; SHILTS MATTHEW ; FAISON CHUCK ; LARSON PAUL ; CHRISTIE PATRICK ; PATRICK P CHRISTIE ; MICHAEL BORMAN ; JOE TEVIS

**Agent(s):** ELLIPTIC LEGAL AND PATENT SERVICES; FASKEN MARTINEAU DUMOULIN LLP; VOSSIUS AND PARTNER PATENTANWAELTE RECHTSANWAELTE MBB; BECK TYSVER EVANS PLLC; TYSVER BECK EVANS PLLC; TYSVER DANIEL A ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY NZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

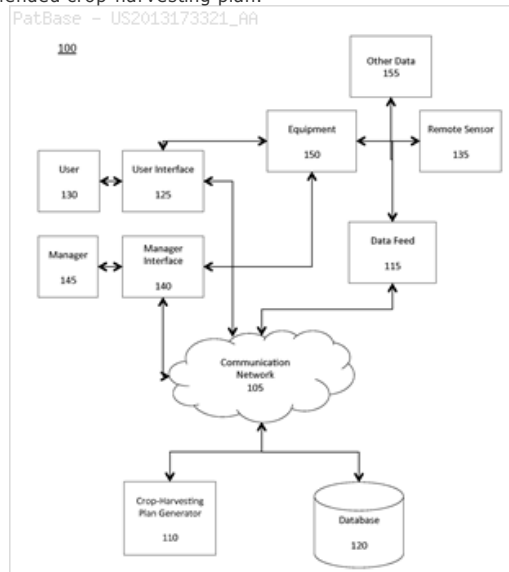
**Abstract:** Crop-harvesting plans automatically generated based on crop-harvesting information received from a variety of sources, such as a user, remote sensor, database, data feed and/or a social network. The crop-harvesting plans may dynamically aid farmers and other production agriculture professionals when determining a crop-harvesting plan and then implementing that crop-harvesting plan. Crop-harvesting plans may include a variety of recommended crop-harvesting practices, logistics, sequences and projected outcomes for the implementation of the recommended crop-harvesting plan.

**Classifications:**

**International (IPC 8-9):** G06Q10/06 (Advanced/Invention)

**CPC:** G06Q10/04 G06Q50/02 A01B79/005 A01D91/00 G06Q10/063 G06Q10/06

**US:** 705/7.11 705/7.12



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2013173321 AA    | 20130704         | US20110341625      | 20111230         |
| US2016026940 AA    | 20160128         | US20150872598      | 20151001         |

**Priority:**

US20110341625 20111230 US20150872598 20151001

**Probable Assignee:** SUPERIOR EDGE INC

**Assignee(s):** (std): AGLTIX INC ; JOHNSON JEROME DALE

**Assignee(s):** SUPERIOR EDGE INC

**Inventor(s):** (std): JOHNSON JEROME DALE

**24) Family number: 55037298 (US2013289873A)**

© PatBase

**Title:** SYSTEM AND METHOD FOR TRACKING DRIVER HOURS AND TIMEKEEPING

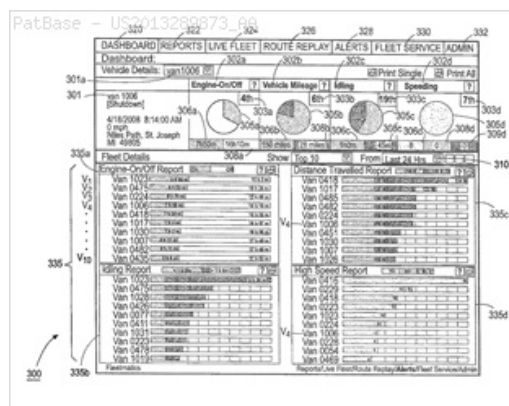
**Abstract:** A system and method for processing GPS event data and providing an interface for presentation of timekeeping reports and alerts.

**Classifications:**

**International (IPC 8-9):** G06F17/00 G06Q10/06 G06Q10/08 G07C5/00 G07C5/02 (Advanced/Invention)

**CPC:** G06Q10/063114 G06F17/00 G06Q10/06 G06Q10/08 G07C5/008 G07C5/02

**US:** 701/482 705/7.15



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP2842086 A1       | 20150304         | EP20130708404      | 20130307         |
| EP2842108 A1       | 20150304         | EP20130710806      | 20130307         |
| US2013289873 AA    | 20131031         | US20130837721      | 20130315         |
| US2014108080 AA    | 20140417         | US20130837422      | 20130315         |
| WO13159973 A1      | 20131031         | WO2013EP54553      | 20130307         |
| WO13159974 A1      | 20131031         | WO2013EP54555      | 20130307         |

**Priority:**

US20120639426P 20120427 WO2013EP54555 20130307 WO2013EP54553 20130307

**Probable Assignee:** FLEETMATICS IRELAND LTD**Assignee(s):** (std): FLEETMATICS IRL LTD**Assignee(s):** VERIZON CONNECT IRELAND LTD ; CITIBANK NA ADMINISTRATIVE AGENT AS ; FLEETMATICS DEVELOPMENT LTD ; FLEETMATICS IRELAND LTD**Inventor(s):** (std): MITCHELL PETER**Agent(s):** EISENFUEHR SPEISER; EISENFUEHR SPEISER AND PARTNER ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**25) Family number: 13346792** (US6762857B)

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**Title:** Method and apparatus to enable processing multiple capabilities for a sub-job when using a set of commonly shared resources**Abstract:** Prioritizing a printing system's basic processing resources includes providing a job contention manager (JCM) that adds a first basic job resource to queues of each basic resource which a first video capability requires to perform a first sub-job. The first basic job resources are ready for processing if they are at the top of all of the queues, of all the basic resources, required by the first video capability. The JCM adds a second basic job resource sub-job to queues of each basic resource which a second video capability requires to perform the first sub-job. The second basic job resources, are ready for processing after the first basic job resource, if the first and second basic job resources in the queue are submitted by the same job service and if the second basic job resource is for the same sub-job as the first basic job resource's sub-job.**Classifications:****International (IPC 8-9):** G03G21/00 H04N1/00

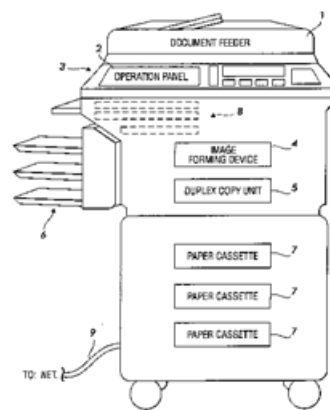
H04N1/32 (Advanced/Invention);

G03G21/00 H04N1/00 H04N1/32 (Core/Invention)

**International (IPC 1-7):** G03G21/00 G06F15/00 G06F17/30 G06F9/46 H04N1/00 H04N1/32**CPC:** H04N1/00915 H04N1/00954 H04N1/32561 H04N1/32598**European:** H04N1/00V1 H04N1/00V9 H04N1/32K H04N1/32K9**US:** 358/1.15 358/1.16 358/1.9

PatBase - US6762857\_BA

U.S. Patent Jul. 13, 2004 Sheet 1 of 15 US 6,762,857 B1

**FIG. 1**  
PRIOR ART**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| EP1104169 A2       | 20010530         | EP20000310589      | 20001129         |
| EP1104169 A3       | 20020710         | EP20000310589      | 20001129         |
| EP1104170 A2       | 20010530         | EP20000310595      | 20001129         |
| EP1104170 A3       | 20020710         | EP20000310595      | 20001129         |
| JP2001228749 A2    | 20010824         | JP20000363553      | 20001129         |
| US6762857 BA       | 20040713         | US19990450151      | 19991129         |

**Priority:**

US19990450151 19991129

**Probable Assignee:** XEROX CORP**Assignee(s):** (std): XEROX CORP**Assignee(s):** BANK ONE NA ADMINISTRATIVE AGENT AS ; JPMORGAN CHASE BANK COLLATERAL AGENT AS**Inventor(s):** (std): LAMENDOLA NICHOLAS M ; SALGADO DAVID L ; TURMON RODNEY L**Agent(s):** YOSHIDA KENJI; ISHIDA JUN**Designated states:** AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR**26) Family number: 28282995** (US2002133505A)

© PatBase

**Abstract:** A system is provided that comprises a crop database for storing information on the crops that are appropriate for cultivation in terms of cultivation areas and cultivation seasons and a server for providing over the Internet a web site that is associated with the crop database. In response to a user's access the web site, the server transmits an input form to the user so as to allow the user to input the user's crop cultivation area and the cultivation season in the input form. The server retrieves crop information from the crop database based on the information in the filled-in input form transmitted back from the user, and to transmit retrieved crop information to the user. The system may comprise a farm tractor database for storing information on farm tractors that are appropriate for crops to be cultivated as well as information on attachments to be mounted on these farm tractors. The system includes a server for providing over the Internet a web site that is associated with the farm tractor database. In response to a user's access the web site, the server transmits to the user a page including farm tractor information retrieved from the farm tractor database and a linked button. When the user moves a cursor onto the button and clicks it, that event is transmitted to the server. The server retrieves information on the attachments from the farm tractor database and transmits retrieved information to the user.

**Classifications:**

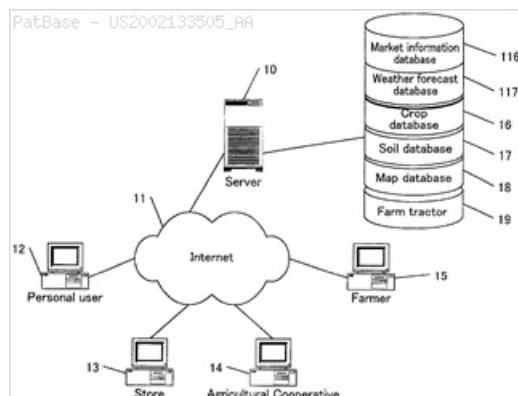
**International (IPC 8-9):** A01B79/00 A01G1/00 G06F17/30 G06Q10/00 G06Q30/00 G06Q30/02 G06Q30/06 G06Q50/00 G06Q50/02 G06Q50/10 G09B29/00 G09B29/10 H04M11/00 (Advanced/Invention)

**International (IPC 1-7):** A01B79/00 A01G1/00 G06F17/30 G06F17/60 G06F19/00 G06F7/00 G09B29/00 G09B29/10 H04M11/00

**CPC:** G06Q30/02

**European:** G06F17/60B2 G06Q30/02

**US:** 1/1 1/P 707/104.1 707/999.107 707/999.107S

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| BRPI0208482 A      | 20040309         | BR2002PI08482      | 20020226         |
| CA2435995 AA       | 20030724         | CA20022435995      | 20020226         |
| CN1493050 A        | 20040428         | CN20028005456      | 20020226         |
| EP1389326 A1       | 20040218         | EP20020700776      | 20020226         |
| JP2002269173 A2    | 20020920         | JP20010072723      | 20010314         |
| JP2002278968 A2    | 20020927         | JP20010081242      | 20010321         |
| JP2002279252 A2    | 20020927         | JP20010081241      | 20010321         |
| JP2002288363 A2    | 20021004         | JP20010085896      | 20010323         |
| JP2002288563 A2    | 20021004         | JP20010089524      | 20010327         |
| PE10242002 A1      | 20021108         | PE20020000196      | 20020312         |
| TH53718 A          | 20021105         | TH20021000837      | 20020312         |
| US2002133505 AA    | 20020919         | US20020081151      | 20020225         |
| WO02073484 A2      | 20020919         | WO2002JP01703      | 20020226         |

**Priority:**

JP20010072723 20010314      JP20010081241 20010321      JP20010081242 20010321  
 JP20010085896 20010323      JP20010089524 20010327      WO2002JP01703 20020226

**Probable Assignee:** HONDA GIKEN KOGYO KK

**Assignee(s):** (std): HONDA GIKEN KOGYO KK ; HONDA MOTOR CO LTD ; KUJI HIDEKI

**Assignee(s):** HONDA GIKEN KOGYO K K ; HONDA GIKEN KOGYO KABUSHIKI KAISHA

**Inventor(s):** (std): HIDEKI KUJI ; KUJI HIDEKI

**Inventor(s):** HIDEKI ; KUJI

**Agent(s):** GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP

**Designated states:** AT BE BR CA CH CN CY DE DK ES FI FR GB GR ID IE IT LI LU MC NL PH PT SE TR VN

**27) Family number: 28995951 (US2003158887A)**

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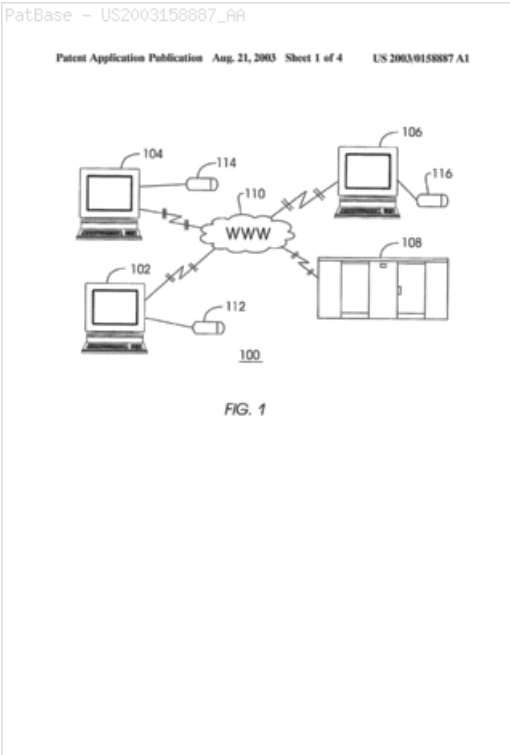
**Title:** MASSIVELY COMPUTATIONAL PARALLIZABLE OPTIMIZATION MANAGEMENT SYSTEM AND METHOD

**Abstract:** A distributed processing system, program product and method of executing a computer program distributed across a plurality of computers. First, interested participants register and provide a commitment for available excess computer capacity. Participants may enter a number of available hours and machine characteristics. A normalized capacity may be derived from the machine characteristics and a normalized excess capacity may be derived from the number of hours committed for the participant. New registrants may be assigned benchmark tasks to indicate likely performance. Parties may purchase capacity for executing large computer programs and searches. The computer program is partitioned into multiple independent tasks of approximately equal size and the tasks are distributed to participants according to available excess capacity. A determination is made whether each distributed task will execute within a selected range of other distributed tasks and, if not, tasks may be reassigned. The likelihood that a task will complete may be based on the participant's past performance. As each task is completed, the completing participant is checked to determine if the task is on schedule. Any task assigned to computers that are found to be behind schedule may be reassigned to other participants. A check is made to determined whether each task is assigned to at least one participant and several tasks may be assigned to multiple participants. Once all tasks are complete, the best result is selected for each task. Each participant may be compensated for normalized excess capacity and that compensation and charges to requesting parties may be based on total available normalized capacity.

**Classifications:**

**International (IPC 8-9):** G06F15/16 G06F9/50 (Advanced/Invention);  
 G06F15/16 G06F9/46 (Core/Invention)

**International (IPC 1-7):** G06F15/16  
**CPC:** G06F9/5072 G06F9/5066  
**European:** G06F9/50C2  
**US:** 709/201 709/213 709/230 709/232 718/107



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2003158887 AA    | 20030821         | US20020045857      | 20020109         |
| US7013344 BB       | 20060314         | US20020045857      | 20020109         |

**Priority:**

US20020045857 20020109

**Probable Assignee:** TWITTER INC  
**Assignee(s):** (std): IBM  
**Assignee(s):** INT BUSINESS MACHINES CORP ; TWITTER INC  
**Inventor(s):** (std): MEGIDDO NIMROD  
**Agent(s):** CHARLES W; MARC D

**28) Family number: 29456235** (US2003187560A) © PatBase

**Title:** METHODS AND APPARATUS FOR PRECISION AGRICULTURE OPERATIONS UTILIZING REAL TIME KINEMATIC GLOBAL POSITIONING SYSTEM SYSTEMS

**Abstract:** Real time kinematic (RTK) global positioning system (GPS) technology is integrated with precision farming methodologies to provide highly accurate seeding, cultivating, planting and/or harvesting operations. RTK GPS systems are used to control fully or semi-autonomous vehicles in these operations and may allow for precision planting of seeds (e.g., from a seeder equipped with an RTK GPS receiver and related equipment) and/or precision weed removal (e.g., using a vehicle fitted with weed eradication mechanisms such as augers and/or herbicide sprayers). Crop specific fertilizer/pesticide application is also enabled through the use of centimeter-level accurate positioning techniques.

**Classifications:**

**International (IPC 8-9):** A01B79/00 G01S19/14  
G01S19/23 (Advanced/Invention)  
**International (IPC 1-7):** G01C21/36 G06F19/00 G06F7/70 G06G7/78  
**CPC:** Y10S111/904 A01B79/005 A01C21/005 A01B39/18 Y02A40/12  
**European:** A01B79/00P A01C21/00  
**US:** 111/200 111/904 172/2 172/2S 172/5 342/357.13 342/357.17  
342/357.52 342/357.62 56/10.20A 56/10.20D 56/10.2A 56/10.2D  
56/102A 56/102D 701/213 701/213S 701/214 701/466 701/468 701/469  
701/469S 701/470 701/50 701/50P

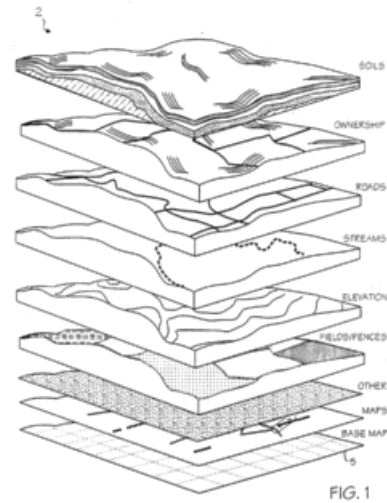


FIG. 1

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2003187560 AA    | 20031002         | US20030400949      | 20030326         |
| US6199000 BA       | 20010306         | US19980116312      | 19980715         |
| US6553299 BA       | 20030422         | US20000721372      | 20001122         |

**Priority:**

US19980116312 19980715      US20000721372 20001122      US20030400949 20030326

**Probable Assignee:** TRIMBLE NAVIGATION LTD

**Assignee(s):** (std): TRIMBLE NAVIGATION LTD

**Assignee(s):** KELLER RUSSELL J ; LANGE ARTHUR F ; NICHOLS MARK E ; TRIMBLE NAVIGATION LIMITED

**Inventor(s):** (std): KELLER RUSSELL J ; LANGE ARTHUR F ; NICHOLS MARK E

**29) Family number: 34504906 (US2007124000A)**

© PatBase

**Title:** PROCESSES FOR PROJECT-ORIENTED JOB-SITE MANAGEMENT

**Abstract:** Systems and methods are disclosed for project-oriented job-site management. According to one embodiment, a system is disclosed for managing a project environment including a work machine performing operations associated with a project included in the project environment. The system may include a project management system configured to store a first set of project specifications for the project in a storage device, receive operation data from the work machine reflecting the operations of the work machine, analyze the operation data to determine the status of the work machine, and generate a second set of project specifications based on the status of the work machine. The system may also include a project subscriber configured to receive the second set of project specifications from the project management system and determine an action to be taken with the work machine based on the status of the work machine. The project management system provides a command to the work machine for adjusting the operations of the work machine associated with the project based on the second set of project specifications and the determined action.

**Classifications:**

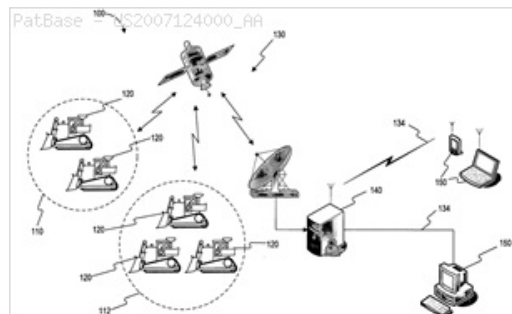
**International (IPC 8-9):** G05B15/02 (Advanced/Invention);

G05B15/02 (Core/Invention)

**CPC:** G06Q10/103 G05B2219/23297 G05B19/0426

**European:** G05B19/042P G06Q10/103 S05B219/23297

**US:** 700/9 700/9P 701/50 701/50S 705/1 705/1.1 705/301 705/301P

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2007124000 AA    | 20070531         | US20050289309      | 20051130         |

**Priority:**

US20050289309 20051130

**Probable Assignee:** CATERPILLAR INC**Assignee(s):** (std): CATERPILLAR INC**Inventor(s):** (std): MOUGHLER ERIC A ; TURCOT KEITH A ; VYAS BHAVIN J**Inventor(s):** VYAS BHAVIN JAGDLSHBHAI ; MOUGHLER ERIC ; TURCOT KEITH ALBERT ; VYAS BHAVIN ; MOUGHLER ERIC ALAN ; TURCOT KEITH**Agent(s):** CATERPILLAR FINNEGAN HENDERSON LLP**30) Family number: 51434129** (US2012253709A)

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**Title:** AUTOMATIC DETECTION OF MACHINE STATUS FOR FLEET MANAGEMENT

**Abstract:** An automatic machine status detection system uses apparatus data from one or more sensors or machine components to determine a status for an agricultural machine. An automatic data unit onboard a machine can receive apparatus data and communicate it to a central management system. In an exemplary embodiment, a status determination module can receive the apparatus data, use the to make one or more state determinations, and based on the results of those determinations, determine an activity status for a machine. Engine state, motion state, heading state, implement state and PTO state can be used to determine that a machine has a status identified as Off, Idle, Traveling, Turning or Working. Machine status information can be provided to a user to improve operations efficiency and facilitate billing and administrative services.

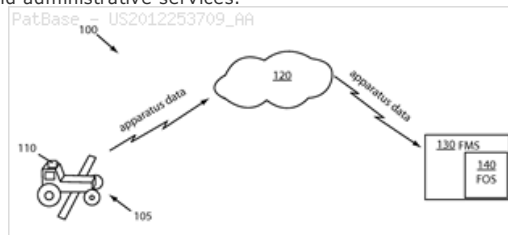
**Classifications:****International (IPC 8-9):** G01D21/00 G01D7/02 G06F11/30 G06F15/00

G06F17/40 G06F19/00 G06Q99/00 G07C5/00 G07C5/08

G08G1/123 (Advanced/Invention)

**CPC:** G06Q10/06 G08G1/20 G07C5/008 G01D7/02 G01D21/00

G06F11/3065 G06F17/40 G06F19/00 G06Q99/00 G07C5/085

**European:** G07C5/00T G07C5/08R2 G08G1/20**US:** 1/1 702/182 702/188 702/60**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2012253709 AA    | 20121004         | US20110341500      | 20111230         |
| US2012253743 AA    | 20121004         | US20110341450      | 20111230         |
| US2012253744 AA    | 20121004         | US20110341475      | 20111230         |
| US9269200 BB       | 20160223         | US20110341475      | 20111230         |
| WO12092588 A1      | 20120705         | WO2011US68174      | 20111230         |
| WO12092592 A1      | 20120705         | WO2011US68182      | 20111230         |
| WO12092599 A1      | 20120705         | WO2011US68194      | 20111230         |

**Priority:**

US20100428692P 20101230

US20100428693P 20101230

US20100428695P 20101230

US20110341450 20111230

US20110341475 20111230

US20110341500 20111230

**Probable Assignee:** AGCO CORP**Assignee(s):** (std): AGCO CORP ; RIEGGER LORENZ ; SCHMIDT LEE ; SCHMIDT LEE A**Inventor(s):** (std): RIEGGER LORENZ ; SCHMIDT LEE ; SCHMIDT LEE A**Agent(s):** LAFFERTY WM BROOK ET AL; LAFFERTY BROOK WM ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

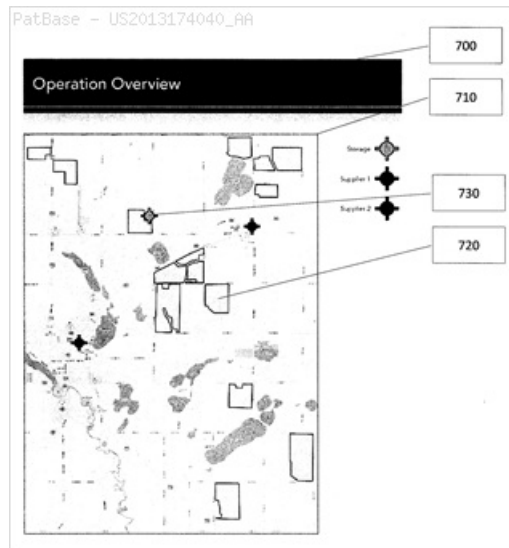
**31) Family number: 54263430** (US2013174040A)

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**Title:** METHODS, APPARATUS AND SYSTEMS FOR GENERATING, UPDATING AND EXECUTING A CROP-PLANTING PLAN

**Abstract:** Crop-planting plans may be generated with crop-planting information received from a variety of sources, such as a user, remote sensor, database, and/or data feed. The crop-planting plans may dynamically aid farmers and other production agriculture professionals when determining a crop-planting strategy and implementing a crop-planting plan. Crop-planting plans may include a variety of recommended crop-planting practices and projected outcomes for the implementation of the recommended crop-planting practices.

**Classifications:****International (IPC 8-9):** G06F3/01 (Advanced/Invention)**CPC:** G06Q10/06**US:** 715/733



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2013174040 AA    | 20130704         | US20110341753      | 20111230         |

#### Priority:

US20110341753 20111230

**Probable Assignee:** SUPERIOR EDGE INC  
**Assignee(s):** (std): JOHNSON JEROME DALE  
**Assignee(s):** SUPERIOR EDGE INC  
**Inventor(s):** (std): JOHNSON JEROME DALE

#### 32) Family number: 55709033 (US2015094916A)

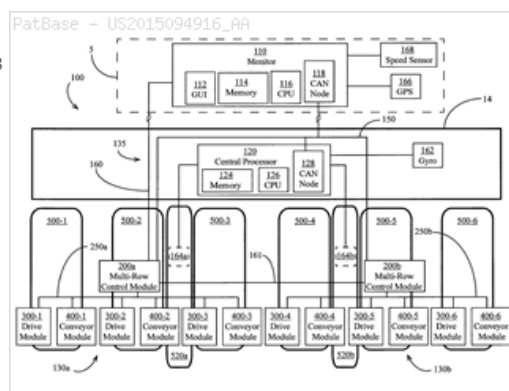
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**Title:** SYSTEMS, METHODS AND APPARATUS FOR MULTI-ROW AGRICULTURAL IMPLEMENT CONTROL AND MONITORING

**Abstract:** Systems, methods and apparatus are provided for monitoring and controlling an agricultural implement, including seed planting implements. Systems, methods and apparatus are provided for detecting seeds being conveyed by seed conveyor. Systems, methods and apparatus are provided for monitoring and controlling deposition of secondary crop inputs such as fertilizer and insecticide.

#### Classifications:

**International (IPC 8-9):** A01B49/06 A01C A01C19/02 A01C21/00 A01C7/00 A01C7/04 A01C7/06 A01C7/10 A01C7/12 A01C7/16 A01C7/18 A01C7/20 A01M9/00 G01V8/10 G01V8/20 G06M7/02 (Advanced/Invention); A01C5/06 (Advanced/Non-invention)  
**CPC:** A01M9/0092 A01B49/06 A01C21/002 A01C7/06 A01C7/16 A01C21/00 A01C7/105 A01C21/005 A01C7/128 A01C19/02 G01V8/20 A01C5/064 A01C5/068 A01C7/203 A01C7/102 A01C7/20  
**US:** 1/1 111/171 701/50



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR092357 AA        | 20150415         | AR2013P102663      | 20130725         |
| AU2013295763 AA    | 20140130         | AU20130295763      | 20130725         |
| AU2013295763 BB    | 20171012         | AU20130295763      | 20130725         |
| AU2018200214 AA    | 20180201         | AU20180200214      | 20180110         |
| BR112015001540 A2  | 20170704         | BR20151101540      | 20130725         |
| CA2879731 AA       | 20150121         | CA20132879731      | 20130725         |
| DE602013021821 D1  | 20170713         | DE201360021821T    | 20130725         |
| EP2876993 A1       | 20150603         | EP20130823843      | 20130725         |
| EP2876993 A4       | 20160323         | EP20130823843      | 20130725         |
| EP2876993 B1       | 20170531         | EP20130823843      | 20130725         |
| EP3259972 A1       | 20171227         | EP20170173466      | 20130725         |
| ES2629517 T3       | 20170810         | ES20130823843T     | 20130725         |
| HU032580 T2        | 20170928         | HU20130823843T     | 20130725         |
| LT2876993 T        | 20171110         | LT20130823843T     | 20130725         |

|                 |          |               |          |
|-----------------|----------|---------------|----------|
| UA113660 C2     | 20170227 | UA20150001624 | 20130725 |
| US2015094916 AA | 20150402 | US20140562400 | 20141205 |
| US2015201549 AA | 20150723 | US20130417146 | 20130725 |
| US2016249525 AA | 20160901 | US20160150403 | 20160509 |
| US2018139893 AA | 20180524 | US20180877357 | 20180122 |
| US9332689 BB    | 20160510 | US20130417146 | 20130725 |
| US9872424 BB    | 20180123 | US20160150403 | 20160509 |
| US9999175 BB    | 20180619 | US20140562400 | 20141205 |
| WO14018717 A1   | 20140130 | WO2013US51971 | 20130725 |
| ZA201500484 A   | 20160428 | ZA20150000484 | 20150122 |

#### Priority:

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|----------------|----------|---------------|----------|---------------|----------|
| US20120675714P | 20120725 | AU20130295763 | 20130725 | US20130417146 | 20130725 |
| EP20130823843  | 20130725 | WO2013US51971 | 20130725 | US20140562400 | 20141205 |
| US20150417146  | 20150124 | US20160150403 | 20160509 | AU20180200214 | 20180110 |
| US20180877357  | 20180122 |               |          |               |          |

**Probable Assignee:** PRECISION PLANTING LLC

**Assignee(s):** (std): PREC PLANTING LLC

**Assignee(s):** PRECISION PLANTING LLC ; SAUDER DEREK ; SAUDER TIM ; STOLLER JASON ; PRECISION PLANTING LLC TREMONT ; BAURER PHIL ; HODEL JEREMY

**Inventor(s):** (std): STOLLER JASON ; HODEL JEREMY ; SAUDER TIM ; BAURER PHIL ; SAUDER DEREK ; BAURER PHIL ; SAUDER DOUG ; SAUDER DECEASED DEREK ; PHIL BAURER ; TIM SAUDER ; JASON STOLLER ; DEREK SAUDER ; JEREMY HODEL ; SAUDER TIMOTHY

**Inventor(s):** BAURER PHIL TREMONT ; SAUDER TIM TREMONT ; STOLLER JASON MORTON ; SAUDER DEREK TREMONT ; HODEL JEREMY MORTON

**Agent(s):** SPRUSON AND FERGUSON; MACPHERSON LESLIE AND TYERMAN LLP; DEHMEI AND BETTENHAUSEN PATENTANWALTE PARTMBB; WIGHTMAN DAVID ALEXANDER; LAWRENCE JOHN; PEARCE DAVID HENRY; ELZABURU SLP ELZABURU SLP; THOMAS J; LARKIN HOFFMAN DALY AND LINDGREN LTD; OPPOLD THOMAS J

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

### 33) Family number: 55763282 (US2015237795A)

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**Title:** SYSTEMS AND METHODS FOR CONTROL, MONITORING AND MAPPING OF AGRICULTURAL APPLICATIONS

**Abstract:** A system and method for monitoring an agricultural implement. The system includes a monitor device, a communication module and a display device. The monitor device is in electrical communication with a plurality of sensors monitoring the operation of agricultural implement. The implement sensors generate "as-applied" data. The as-applied data is processed and transmitted to a display device via a communication module. The display device renders maps representing the as-applied data. The generated maps may be accessed and displayed as map overlays on a display device with a common view characteristic.

#### Classifications:

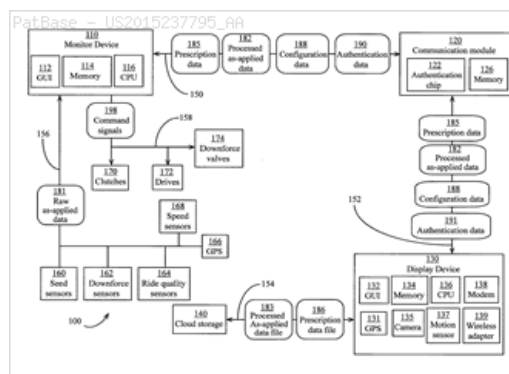
**International (IPC 8-9):** A01B79/00 A01C13/00 A01C21/00 A01C7/18 A1C13/00 G01C G01C11/00 G01C15/00 G01C21/04 G01F15/00 G01L5/00 G06F17/30 G06F19/00 G06F19/26 G06F7/70 G06G7/00 G06G7/76 G07C5/08 G09B29/00 G1C21/04

H04L9/32 (Advanced/Invention);

H04L12/40 (Advanced/Non-invention)

**CPC:** A01C21/005 A01B79/005 G07C5/085 A01C21/00 G01C15/00 G09B29/007 G06F16/29

**US:** 701/29.1 701/32.6 701/50



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR092105 AA        | 20150325         | AR2013P102860      | 20130812         |
| AU2013299359 AA    | 20140213         | AU20130299359      | 20130812         |
| AU2013299359 BB    | 20180920         | AU20130299359      | 20130812         |
| BR112015002799 A2  | 20170704         | BR20151102799      | 20130812         |
| CA2880570 AA       | 20150129         | CA20132880570      | 20130812         |
| DE602013035188 D1  | 20180426         | DE201360035188T    | 20130812         |
| EP2883020 A2       | 20150617         | EP20130828446      | 20130812         |
| EP2883020 A4       | 20160720         | EP20130828446      | 20130812         |
| EP2883020 B1       | 20180328         | EP20130828446      | 20130812         |
| EP3351082 A1       | 20180725         | EP20180159551      | 20130812         |
| UA116355 C2        | 20180312         | UA20150002061      | 20130812         |
| US2015237795 AA    | 20150827         | US20130420863      | 20130812         |
| US2016183450 AB    | 20160630         | US20130420863      | 20130812         |

|                 |          |               |          |
|-----------------|----------|---------------|----------|
| US2017303465 AA | 20171026 | US20170645967 | 20170710 |
| US9699958 BB    | 20170711 | US20130420863 | 20130812 |
| WO14026183 A2   | 20140213 | WO2013US54506 | 20130812 |
| WO14026183 A3   | 20150716 | WO2013US54506 | 20130812 |
| ZA201500753 A   | 20151223 | ZA20150000753 | 20150202 |

#### Priority:

US20120682074P 20120810 US20120738292P 20121217 EP20130828446 20130812  
US20130420863 20130812 WO2013US54506 20130812 US20150420863 20150210  
US20170645967 20170710

**Probable Assignee:** PRECISION PLANTING LLC

**Assignee(s):** (std): PREC PLANTING LLC ; CLIMATE CORP

**Assignee(s):** CLIMATE CORP SAN FRANCISCO ; KOCH JUSTIN ; PRECISION PLANTING LLC ; SAUDER DOUG ; SAUDER TIM ; STUBER JAKOB

**Inventor(s):** (std): SAUDER DOUG ; SAUDER TIM ; STUBER JAKOB ; KOCH JUSTIN ; JUNTIN KOCH ; DOUG SAUDER ; JAKOB STUBER ; TIM SAUDER

**Inventor(s):** KOCH JUSTIN DEER CREEK ; SAUDER DOUG WASHINGTON ; SAUDER TIM TREMONT ; STUBER JAKOB TREMONT

**Agent(s):** SPRUSON AND FERGUSON; MACPHERSON LESLIE AND TYERMAN LLP; MLT AIKINS LLP; DEHMEI AND BETTENHAUSEN PATENTANWALTE PARTMBB; WIGHTMAN DAVID ALEXANDER; BARKER BRETTELL LLP; HICKMAN PALERMO BECKER BINGHAM LLP; OPPOLD THOMAS J

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

### 34) Family number: 56771207 (US2014180741A)

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**Title:** SYSTEM AND METHOD FOR AUTOMATIC ALLOCATION OF MOBILE RESOURCES TO TASKS

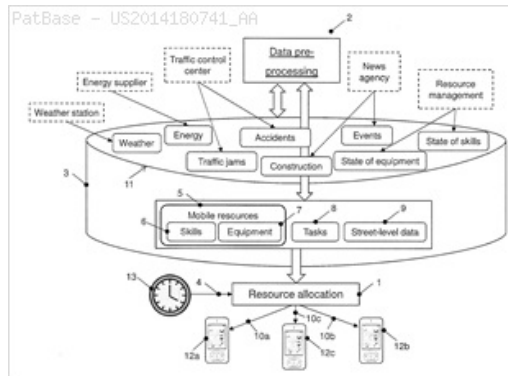
**Abstract:** A system for automatic allocation of mobile resources to tasks includes at least one database which stores for each mobile resource at least one corresponding skill and equipment as well as street-level data defining roads between a current location of the mobile resources and the distant locations of the tasks, and dynamic data which have a potential impact on performance of the tasks. A first data processing unit allocates the mobile resources to the tasks by allocating the skills to the tasks and the equipment, and generates for at least one of the mobile resources an individual schedule including a street-by-street route along the roads to the respectively allocated tasks. A second data processing unit continuously pre-processes the dynamic data to determine which of the street-level data, the mobile resources and the tasks are affected by the dynamic data and to what extent, and to amend the affected data accordingly.

#### Classifications:

**International (IPC 8-9):** G06Q10/00 G06Q10/06 (Advanced/Invention)

**CPC:** G06Q10/06315 G06Q10/06 G06Q10/063112

**US:** 705/7.14



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN103886403 A      | 20140625         | CN201310703016     | 20131219         |
| DE602012040028 D1  | 20171228         | DE201260040028T    | 20121220         |
| EP2747000 A1       | 20140625         | EP20120198470      | 20121220         |
| EP2747000 B1       | 20171122         | EP20120198470      | 20121220         |
| IN01432KO2013 A    | 20140627         | IN2013KO01432      | 20131219         |
| US2014180741 AA    | 20140626         | US20130136454      | 20131220         |

#### Priority:

EP20120198470 20121220

**Probable Assignee:** ABB SCHWEIZ AG

**Assignee(s):** (std): ABB SCHWEIZ AG ; ABB TECHNOLOGY AG

**Inventor(s):** (std): HARJUNKOSKI IIRO ; SALIBA SLEMAN ; FRANKE CARSTEN ; CARSTEN FRANKE ; SLEMAN SELIBA ; IIRO HARJUNKOSKI

**Inventor(s):** LIRO HARJUNKOSKI ; SLEMAN SALIBA

**Agent(s):** MUELLER ANDREAS DIPL PHYS DR RER NAT; KOCK INA; MARKS FRANK

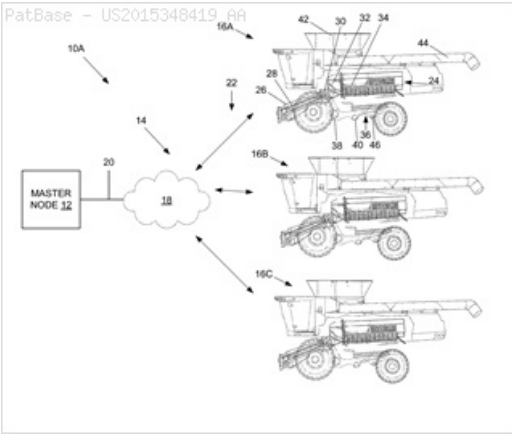
**Designated states:** AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

**Title:** METHOD OF ASSIGNING PLANNED PATHS TO MULTIPLE MACHINES TO COOPERATIVELY COVER AREA

**Abstract:** A method includes providing proximally in time over a wireless medium a first plurality of different just-in-time wayline segments for a given field to a plurality of agricultural machines, respectively, at least one of the different just-in-time wayline segments separated from another of the different just-in-time wayline segments by a length greater than one of the plurality of agricultural machines. Status updates are received from the plurality of agricultural machines and responsive to the status updates, a second plurality of different just-in-time wayline segments for the field to at least a portion of the plurality of agricultural machines are provided over the wireless medium.

**Classifications:**

**International (IPC 8-9):** A01B69/00 G01C21/00 G01S13/60  
G08G1/00 (Advanced/Invention)  
**CPC:** G08G1/20 G01C21/00 A01B69/00 A01B79/02 G05D1/0297  
G05D2201/0201  
**US:** 701/117



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| US2015348419 AA    | 20151203         | US20130654921      | 20131226         |
| WO14105930 A1      | 20140703         | WO2013US77763      | 20131226         |

**Priority:**

US20120746689P 20121228      US20130654921 20131226      WO2013US77763 20131226

**Probable Assignee:** AGCO CORP

**Assignee(s):** (std): AGCO CORP ; MATTHEWS PAUL

**Inventor(s):** (std): MATTHEWS PAUL ; MATTHEWS PAUL ROSS

**Agent(s):** ELLSWORTH JEFF

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW