PatBase - Search results 15 February 2018
Search query (31): [SP]: background[0001] planters are used for planting seeds of crops (e.g., corn, soybeans) in a field. some planters include a display monitor within a cab for displaying a coverage map that shows regions of the field that have been planted. the coverage map of the planter is generated based on planting data collected by the planter. swath control prevents the planter from planting in a region that has already been planted by the same planter.[0002] a combine harvester or combine is a machine that harvests crops. a coverage map of a combine displays regions of the field that have been harvested by that combine. a coverage map allows the operator of the combine know that a region of the field has already been harvested by the same combine. the yield calculation for the yield map is altered if only a partial header width as opposed to a full header width is being harvested by the combine. otherwise, the combine and yield calculation will not know if the combine is only harvesting a partial header width due to a region of the field that has already been harvested by this combine.description of the drawings[0003] fig. 1a illustrates a flow diagram of one method of generating a collaborative shared map between machines for planting or harvesting operations.[0004] fig. 1b illustrates a flow diagram of another method of generating a collaborative shared map between machines for planting or harvesting operations.[0005] fig. 2 illustrates a system for generating a collaborative shared map between machines for planting or harvesting operations in accordance with one embodiment.[0006] fig. 3 illustrates an embodiment of a seed coverage map.[0007] fig. 4 illustrates another embodiment of a seed coverage map.[0008] fig. 5 illustrates an embodiment of a shared collaborative seed coverage map.[0009] fig. 6 illustrates an embodiment of a collaborative yield map.[0010] fig. 7 illustrates a flow diagram of one method of triggering machine control of a machine based on a shared collaborative map.[0011] fig. 8 illustrates a block diagram of a multi-hybrid planter having a seed variety selection system in accordance with one embodiment.[0012] fig. 9 shows an example of data processing system in accordance with one embodiment.description[0013] described herein are methods and systems for generating shared collaborative maps for planting and harvesting operations. in one embodiment, a method of generating a collaborative shared map between machines (e.g., planters, combines) includes generating a first map for a first machine based on a first set of data and generating a second map for a second machine based on a second set of data. the method further includes generating at least one shared collaborative map for at least one of the first and second machines based on the first and second maps.[0014] in the various embodiments, a shared collaborative map (e.g., seed coverage map, population map, seed spacing map, downforce map, harvested coverage map, etc.) is provided for display in a cab of a planter or combine. in one embodiment, a shared collaborative seed coverage map allows an operator of a first planter to avoid planting a region of a region that has already been planted by a second planter. planting regions once rather than accidentally planting a region multiple times saves operator time and reduces equipment operation costs such as maintenance and fuel.[0015] fig. 1a illustrates a flow diagram of one embodiment for a method 100 of generating a collaborative shared map between machines for planting or harvesting operations. the machines may both be in operation simultaneously in a field or only one machine may be in operation while another machine has previously been in operation in the field. the method 100 is performed by processing logic that may comprise hardware (circuitry, dedicated logic, etc.), software (such as is run on a general purpose computer system or a dedicated machine or a device), or a combination of both. in one embodiment, the method 100 is performed by processing logic of at least one processing system (e.g., processing system of a planter, processing system of a combine, processing system of a cloud based system), at least one monitor (e.g., processing system of a planter monitor, processing system of a combine monitor), network device, or other electronic device that executes instructions of a software application or program with processing logic. the software application or program can be initiated by an operator of a tractor cab (e.g., planter, combine) while in the planter or combine or the software application or program can be initiated remotely with respect to the planter or combine and one or more of the following operations of method 100 are performed.[0016] at block 102, processing logic of a first machine generates a first set of data associated with the first machine for generating a first map (e.g., planting map, harvesting map) and processing logic of a second machine generates a second set of data associated with the second machine for generating a second map (e.g., planting map, harvesting map). the processing logic of each machine may communicate with a gps located in each machine in order to generate the first set of data and the second set of data. the first and second sets of data include geo-referenced data. alternatively, a cloud based system can generate at least one of the first set of data and the second set of data based on communications received from the first and second machines. the first and second sets of data can be generated at similar or different times.[0017] at block 104, the processing logic of the first machine generates the first map for the first machine based on the first set of data and processing logic of the second machine generates the second map for the second machine based on the second set of data. alternatively, the cloud based system can generate at least one of the first and second maps based on communications received from the first or second machines such as the first set of data or the second set of data. the first and second maps can be generated at similar or different times.[0018] in one embodiment, for a planter, a map indicates seed coverage showing which region(s) in a field have been planted by the planter. the seed coverage map can be displayed on a monitor (e.g., planter monitor 890) in a tractor cab in order for the operator to see which type of seed variety has been planted in a particular region of the field. in another embodiment, for a planter, a map indicates seed population (e.g., number of seeds per acre that have been planted). in another embodiment, for a planter, a map indicates seed spacing such that an operator can determine how evenly the seeds are spaced. in an embodiment, a map for a planter indicates downforce in planting seeds. an operator can determine how much additional downforce was applied or how much net downforce was applied to the ground when planting the seeds.[0019] in one embodiment, for a combine, a map shows harvested coverage of the combine such that an operator knows which region(s) have been harvested. in an embodiment, for a combine, a map show yield (e.g., corn or soybean yield in terms of bushels per acre).[0020] at block 106, processing logic of the first machine sends the first map or first set of data for generating the first map to the cloud based system and processing logic of the second machine sends the second map or second set of data for generating the second map to the cloud based system. the processing logic of each machine may communicate with a network interface of each machine for sending the maps or data to the cloud based system. the first and second maps and first and second sets of data can be sent to the cloud based system at similar or different times.[0021] at block 108, processing logic of the first machine receives the second map or second set of data for generating the second map from the cloud based system and processing logic of the second machine receives the first map or first set of data for generating the first map from the cloud based system. the first and second sets of data or first and second maps can be received at similar or different times.[0022] at block 110, processing logic generates at least one shared collaborative map for the first or second machine based on the first and second maps or based on the first and second sets of data. for example, processing logic of at least one of the first machine, the second machine, and the cloud based system generates the at least one shared collaborative map.[0023] in one embodiment, processing logic of the first machine then generates a first shared collaborative map based on the first and second maps or data for generating the first and second map and processing logic of the second machine generates a second shared collaborative map based on the first and second maps or data for generating the first and second maps. the first and second shared collaborative maps can be the same or different. the first and second shared collaborative maps can be generated at similar or different times.[0024] in an embodiment, a network interface of the first machine communicates with a network interface of the second machine (e.g., peer to peer). processing logic of the first machine generates the first set of data and sends the first set of data directly to the second machine and processing logic of the second machine generates the second set of data and sends the second set of data directly to the first machine. the first machine then generates a first shared collaborative map based on the first and second sets
Results: 9

Carlos Guevara

Search history

Search 1:	PN=(WO2015/120470) (Results 1)
Search 2:	[SP]: methods and systems for generating shared collaborative maps described herein are methods and systems for generating shared collaborative maps for planting or harvesting operations. a method of generating a collaborative shared map between machines includes generating a first map for a first machine based on a first set of data and generating a second map for a second machine based on a second set of data. the method further includes generating at least one shared collaborative map for at least one of the first and second machines based on the first and second maps. (Results 500)
Search 3:	2 and collaborative (Results 24)
Search 4:	3 and map* (Results 24)
Search 5:	3 and seed* (Results 16)
Search 6:	2 and farm* (Results 228)
Search 7:	6 and map* (Results 228)
Search 8:	7 and seed* (Results 139)
Search 9:	8 and collaborative (Results 6)

Search 10: 2 and cloud (Results 145)

Search 11: 10 and agriculture (Results 54)

Search 12: 11 and seed (Results 46)

Search 13: 12 and map (Results 44)

Search 14: 13 and collaborative (Results 4)

Search 15: agriculture and map* and collaborative and map* (Results 247)

Search 16: 15 and seed (Results 60)

Search 17: 16 and shar* (Results 47)

Search 18: harves* (Results 357796)

Search 19: 17 and harves* (Results 35)

Search 20: 19 and farm* (Results 22)

Search 21: FT=(agriculture and cloud and harvest* and mapping) and PN=(WO2015/120470) (Results 0)

Search 22: FT=(agriculture and cloud and harvest* and mapping) (Results 211)

Search 23: 22 and machine* (Results 156)

Search 24: 23 and field (Results 155)

Search 25: 24 and seed* (Results 117)

Search 26: 25 and server (Results 79)

Search 27: 26 and manag* (Results 75)

Search 28: 27 and route (Results 10)

Search 29: 27 and overlap (Results 20)

Search 30: PN=(WO2015/120470) (Results 1)

Search 31: [SP]: background[0001] planters are used for planting seeds of crops (e.g., corn, soybeans) in a field. some planters include a display monitor within a cab for displaying a coverage map that shows regions of the field that have been planted. the coverage map of the planter is generated based on planting data collected by the planter. swath control prevents the planter from planting in a region that has already been planted by the same planter.[0002] a combine harvester or combine is a machine that harvests crops. a coverage map of a combine displays regions of the field that have been harvested by that combine. a coverage map allows the operator of the combine know that a region of the field has already been harvested by the same combine. the yield calculation for the yield map is altered if only a partial header width as opposed to a full header width is being harvested by the combine. otherwise, the combine and yield calculation will not know if the combine is only 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on a shared collaborative map.[0011] fig. 8 illustrates a block diagram of a multi-hybrid planter having a seed variety selection system in accordance with one embodiment.[0012] fig. 9 shows an example of data processing system in accordance with one embodiment.description[0013] described herein are methods and systems for generating shared collaborative maps for planting and harvesting operations. in one embodiment, a method of generating a collaborative shared map between machines (e.g., planters, combines) includes generating a first map for a first machine based on a first set of data and generating a second map for a second machine based on a second set of data. the method further includes generating at least one shared collaborative map for at least one of the first and second machines based on the first and second maps.[0014] in the various embodiments, a shared collaborative map (e.g., seed coverage map, population map, seed spacing map, downforce map, harvested coverage map, etc.) is provided for display in a cab of a planter or combine. in one embodiment, a shared collaborative seed coverage map allows an operator of a first planter to avoid planting a region of a region that has already been planted by a second planter. planting regions once rather than accidentally planting a region multiple times saves operator time and reduces equipment operation costs such as maintenance and fuel.[0015] fig. 1a illustrates a flow diagram of one embodiment for a method 100 of generating a collaborative shared map between machines for planting or harvesting operations. the machines may both be in operation simultaneously in a field or only one machine may be in operation while another machine has previously been in operation in the field. the method 100 is performed by processing logic that may comprise hardware (circuitry, dedicated logic, etc.), software (such as is run on a general purpose computer system or a dedicated machine or a device), or a combination of both. in one embodiment, the method 100 is performed by processing logic of at least one processing system (e.g., processing system of a planter, processing system of a combine, processing system of a cloud based system), at least one monitor (e.g., processing system of a planter monitor, processing system of a combine monitor), network device, or other electronic device that executes instructions of a software application or program with processing logic. the software application or program can be initiated by an operator of a tractor cab (e.g., planter, combine) while in the planter or combine or the software application or program can be initiated remotely with respect to the planter or combine and one or more of the following operations of method 100 are performed.[0016] at block 102, processing logic of a first machine generates a first set of data associated with the first machine for generating a first map (e.g., planting map, harvesting map) and processing logic of a second machine generates a second set of data associated with the second machine for generating a second map (e.g., planting map, harvesting map). the processing logic of each machine may communicate with a gps located in each machine in order to generate the first set of data and the second set of data. the first and second sets of data include geo-referenced data. alternatively, a cloud based system can generate at least one of the first set of data and the second set of data based on communications received from the first and second machines. the first and second sets of data can be generated at similar or different times.[0017] at block 104, the processing logic of the first machine generates the first map for the first machine based on the first set of data and processing logic of the second machine generates the second map for the second machine based on the second set of data. alternatively, the cloud based system can generate at least one of the first and second maps based on communications received from the first or second machines such as the first set of data or the second set of data. the first and second maps can be generated at similar or different times.[0018] in one embodiment, for a planter, a map indicates seed coverage showing which region(s) in a field have been planted by the planter. the seed coverage map can be displayed on a monitor (e.g., planter monitor 890) in a tractor cab in order for the operator to see which type of seed variety has been planted in a particular region of the field. in another embodiment, for a planter, a map indicates seed population (e.g., number of seeds per acre that have been planted). in another embodiment, for a planter, a map indicates seed spacing such that an operator can determine how evenly the seeds are spaced. in an embodiment, a map for a planter indicates downforce in planting seeds. an operator can determine how much additional downforce was applied or how much net downforce was applied to the ground when planting the seeds.[0019] in one embodiment, for a combine, a map shows harvested coverage of the combine such that an operator knows which region(s) have been harvested. in an embodiment, for a combine, a map show yield (e.g., corn or soybean yield in terms of bushels per acre).[0020] at block 106, processing logic of the first

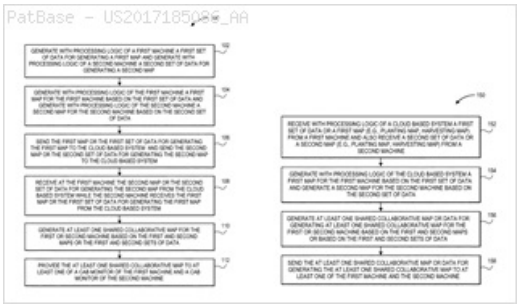
machine sends the first map or first set of data for generating the first map to the cloud based system and processing logic of the second machine sends the second map or second set of data for generating the second map to the cloud based system. the processing logic of each machine may communicate with a network interface of each machine for sending the maps or data to the cloud based system. the first and second maps and first and second sets of data can be sent to the cloud based system at similar or different times.[0021] at block 108, processing logic of the first machine receives the second map or second set of data for generating the second map from the cloud based system and processing logic of the second machine receives the first map or first set of data for generating the first map from the cloud based system. the first and second sets of data or first and second maps can be received at similar or different times.[0022] at block 110, processing logic generates at least one shared collaborative map for the first or second machine based on the first and second maps or based on the first and second sets of data. for example, processing logic of at least one of the first machine, the second machine, and the cloud based system generates the at least one shared collaborative map.[0023] in one embodiment, processing logic of the first machine then generates a first shared collaborative map based on the first and second maps or data for generating the first and second map and processing logic of the second machine generates a second shared collaborative map based on the first and second maps or data for generating the first and second maps. the first and second shared collaborative maps can be the same or different. the first and second shared collaborative maps can be generated at similar or different times.[0024] in an embodiment, a network interface of the first machine communicates with a network interface of the second machine (e.g., peer to peer). processing logic of the first machine generates the first set of data and sends the first set of data directly to the second machine and processing logic of the second machine generates the second set of data and sends the second set of data directly to the first machine. the first machine then generates a first shared collaborative map based on the first and second sets (Results 9)

1) Family number: 60056784 (US2017185086A)

Title: METHODS AND SYSTEMS FOR GENERATING SHARED COLLABORATIVE MAPS

Abstract: Source: US2017185086A Described herein are methods and systems for generating shared collaborative maps for planting or harvesting operations. A method of generating a collaborative shared map between machines includes generating a first map for a first machine based on a first set of data and generating a second map for a second machine based on a second set of data. The method further includes generating at least one shared collaborative map for at least one of the first and second machines based on the first and second maps.

Classifications:
International (IPC 8-9): A01B69/00 A01B79/00 A01C21/00 A01C7/08 A01D41/127 G05D1/02 G09B29/00 (Advanced/Invention)
CPC: A01B79/005 G05D1/0219 G05D1/0287 A01C21/005 A01C7/08 A01D41/127



Family:

Publication number	Publication date	Application number	Application date
AU2015213589 AA	20150813	AU20150213589	20150210
CA2939180 AA	20160809	CA20152939180	20150210
CL2016002010 A1	20170908	CL20160002010	20160810
CN106102444 A	20161109	CN201580013567	20150210
CO20160001750 A2	20161230	CO20160001750	20160909
EP3104676 A1	20161221	EP20150746044	20150210
EP3104676 A4	20171108	EP20150746044	20150210
IN201617030417 A	20161230	IN201617030417	20160906
US2017185086 AA	20170629	US20150300366	20150210
WO15120470 A1	20150813	WO2015US15252	20150210

Priority:

US20140937725P 20140210 US20150300366 20150210 WO2015US15252 20150210

Probable Assignee: CLIMATE CORP

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

Assignee(s): PRECISION PLANTING LLC ; REDDY TIM ; SAUDER DOUG ; BONES TAVIS

Inventor(s): (std): REDDY TIM ; SAUDER DOUG ; BONES TAVIS

Inventor(s): DOUG SAUDER ; TAVIS BONES ; TIM REDDY

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; RIDOUT AND MAYBEE LLP; ESTUDIO CLARKE MODET AND CO CHILE LIMITADA; CAROLINA MERCEDES DAZA MONTALVO; BOTTI MARIO; 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 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 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

2) Family number: 15021399 (US6216071B)

Title: APPARATUS AND METHOD FOR MONITORING AND COORDINATING THE HARVESTING AND TRANSPORTING OPERATIONS OF AN AGRICULTURAL CROP BY MULTIPLE AGRICULTURAL MACHINES ON A FIELD

Abstract: Source: US6216071B An apparatus and method for monitoring and coordinating the harvesting and transporting operations of an agricultural crop by multiple agricultural machines on a field is disclosed. The apparatus includes a first position determining system located on a first agricultural machine, a site database for storing a dynamic model of the field, and a harvest volume indicating system located on the first agricultural machine. A control system receives information from the first position determining system, the site database, and the harvest volume indicating system, and responsively determines an expected time at which the harvested crop will reach a predetermined desired level on the first agricultural machine.

Classifications:
International (IPC 8-9): A01D41/127 A01D43/06 A01D91/00 (Advanced/Invention);
A01D41/00 A01D43/00 A01D91/00 (Core/Invention)
International (IPC 1-7): A01D41/12 A01D43/06 A01D91/00 G06F19/00
CPC: A01B69/007 A01D41/12 A01D41/1275 A01D43/06 A01D91/00 G05D1/0291 G05D2201/0201
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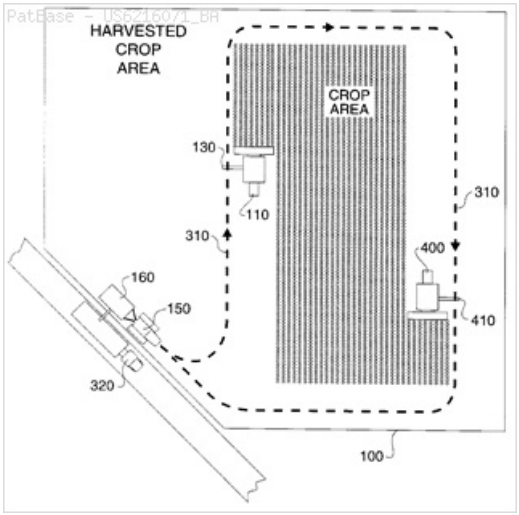
US: 340/988 56/1 701/50 702/5



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Publication number	Publication date	Application number	Application date
AU200020474 A1	20000703	AU20000020474	19991208
AU200020474 A5	20000703	AU20000020474	19991208
US6216071 BA	20010410	US19980213076	19981216
WO0035265 A1	20000622	WO1999US29153	19991208

Priority:
US19980213076 19981216 WO1999US29153 19991208

Probable Assignee: CATERPILLAR INC

Assignee(s): (std)**:** CATERPILLAR INC

Inventor(s): (std)**:** MOTZ DARIN S

Inventor(s): DARIN S MOTZ

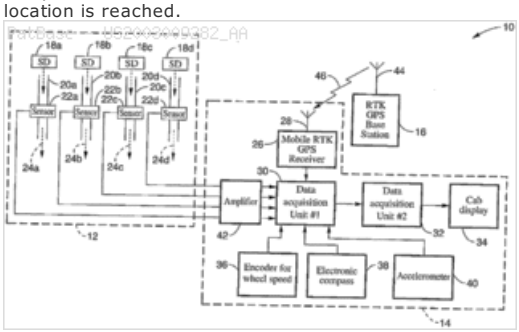
Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG UZ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

3) Family number: 28045842 (US2003009282A)

Title: METHOD AND APPARATUS FOR ULTRA PRECISE GPS-BASED MAPPING OF SEEDS OR VEGETATION DURING PLANTING

Abstract: Source: US2003009282A An ultra precise seed planter apparatus and method for generating a centimeter accuracy map of the location of seeds or vegetation as they are planted from an agricultural planting machine. The apparatus is fitted with a GPS receiver feeding a data logger, and optical sensors that are placed adjacent seed or vegetation dispenser. The data logger monitors GPS time and UTM coordinates, as well as the optical sensors. Ground speed and azimuth are also monitored. The seeds or vegetation are time-tagged as they are dispensed, and software is used to process the dispensing time and GPS location data and estimate the exact coordinates of each seed or plant and its distance from adjacent seeds or plants. As a result, a precise planting map is generated. The invention may also be used to determine the location to dispense seeds or vegetation, and activating the dispenser when that location is reached.

Classifications:
International (IPC 8-9): A01B79/00 A01C7/10 G01S19/48 (Advanced/Invention); G01S13/60 G01S5/14 (Advanced/Non-invention); G01S19/00 (Core/Invention); G01S13/00 G01S5/14 (Core/Non-invention)
International (IPC 1-7): A01C1/00 G01C21/00 G01C21/26
CPC: A01C21/005 A01C7/105 G01S13/60 G01S19/43 G01S19/14 A01B79/005 G01S19/44
European: A01B79/00P A01C7/10B1 G01S19/14 G01S19/44 S01S13/60 S01S19/43
US: 111/200 111/903 111/903S 342/357.12 342/357.17 342/357.31 342/357.310S 56/10.20A 56/10.20R 56/10.2A 56/10.2R 701/207 701/208 701/213 701/213P 701/408 701/409 701/409P 701/468 701/470 701/5 701/50 701/50P 701/50S 702/5



Family:

Publication number	Publication date	Application number	Application date
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US2003028321 AA	20030206	US20010895851	20010629
US2003159633 AA	20030828	US20030358088	20030203
US6516271 BB	20030204	US20010895853	20010629
US6553312 BB	20030422	US20010895851	20010629
US6941225 BB	20050906	US20030358088	20030203

Priority:

US20010895851 20010629 US20010895853 20010629 US20030358088 20030203

Probable Assignee: OF CALIFORNIA UNIV

Assignee(s): (std): UNIV CALIFORNIA

Assignee(s): UNIVERSITY ; OF CALIFORNIA UNIV ; THE REGENTS OF THE UNIVERSITY OF CALIFORNIA ; THE UNIV OF CALIFORNIA ; UNIV

Inventor(s): (std): EHSANI MOHAMMAD ; MATTSON MARK L ; UPADHYAYA SHRINI

Agent(s): OBANION JOHN P; JOHN P

4) Family number: 33898071 (US2006271262A)

Title: WIRELESS AGRICULTURAL NETWORK

Abstract: Source: US2006271262A A farm vehicle monitoring system includes a plurality of farm vehicles and a plurality of sensing devices. Each of the sensing devices measures a respective operating parameter of a respective farm vehicle. A processor collects measurement data from the sensing devices and outputs a report based upon the measurement data. The report is in user readable form.

Classifications:
International (IPC 8-9): G06F19/00 (Advanced/Invention); G06F19/00 (Core/Invention)
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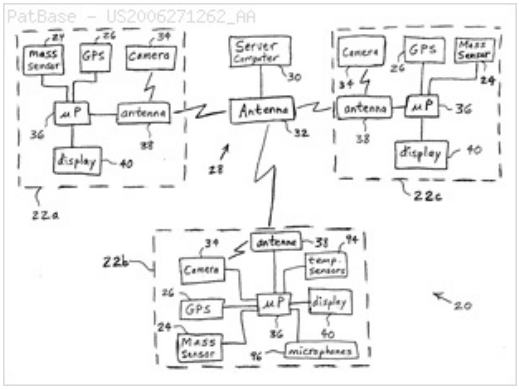
European: A01B79/00P
US: 701/50



Family:

Publication number	Publication date	Application number	Application date
US2006271262 AA	20061130	US20060439849	20060524

Priority:

US20050684029P 20050524 US20060439849 20060524

Probable Assignee: MCLAIN HARRY P III

Assignee(s): (std): MCLAIN HARRY P III

Inventor(s): (std): MCLAIN HARRY P III

Inventor(s): MCLAIN HARRY PHILLIP ; MCLAIN HARRY PIII ; MCLAIN HARRY

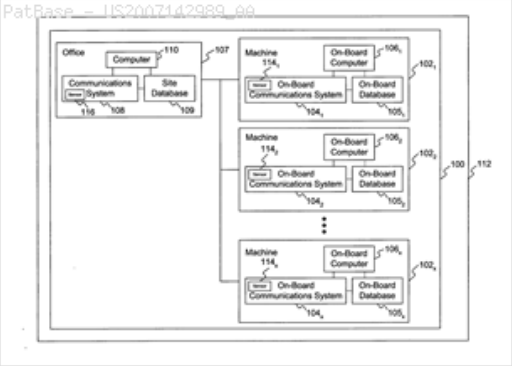
Agent(s): KEITH J SWEDO

5) Family number: 34580174 (US2007142989A)

Title: SYSTEM AND METHOD FOR SHARING TERRAIN DATA AMONG MULTIPLE MACHINES

Abstract: Source: US2007142989A Systems and methods for sharing terrain data among one or more machines include a communications system associated with the one or more machines in electronic communication with each other and to a communications system associated with a remote location. The terrain data may be determined from information received from satellite positioning systems. New information comprising alterations to a worksite by one or more machines may be stored as a snippet. Collected snippets may be combined to form a data block which is sent to one or more identified machines. A bitmap, corresponding to each snippet, is sent to the one or more identified machines in order to locate the new information in the data block. Using the new information, the one or more identified machines may update a composite model of the worksite located at each of the one or more identified machines.

Classifications:
International (IPC 8-9): G01S5/00 G01S5/14 E02F1/00 G01S19/48 G01S5/12 G06F17/30 G06F19/00 H04B7/14 H04L12/00 H04L12/56 (Advanced/Invention);
G01S5/14 (Advanced/Non-invention);
G01S19/00 G01S5/00 H04B7/14 H04L12/56 (Core/Invention);
G01S5/14 (Core/Non-invention)
CPC: G01S5/0072 G01S19/38
European: G01S5/00R3 S01S19/38
US: 701/50



Family:

Publication number	Publication date	Application number	Application date
AU2006241348 AA	20070705	AU20060241348	20061123
AU2006241348 BB	20100715	AU20060241348	20061123
CN101005375 A	20070725	CN200610168901	20061214
CN101005375 B	20110112	CN200610168901	20061214
DE102006055057 A1	20070621	DE200610055057	20061122
SE200602720 A	20070616	SE20060002720	20061215
SE532367 C2	20091222	SE20060002720	20061215
US2007142989 AA	20070621	US20050300444	20051215
US7747369 BB	20100629	US20050300444	20051215

Priority:

US20050300444 20051215

Probable Assignee: CATEPILLAR TRIMBLE CONTROL TECHNOLOGIES LLC

Assignee(s): (std): CATERPILLAR TRIMBLE CONTROL

Assignee(s): CATERPILLAR TRIMBLE CONTROL TE ; CATERPILLAR TRIMBLE CONTROL TECHNOLOGIES LLC ; DAYTON OH 45424 1099 US ; CATEPILLAR TRIMBLE CONTROL TECHNOLOGIES LLC

Inventor(s): (std): KOEHRSEN CRAIG L ; KOEHRSEN CRAIG LAWRENCE ; LAWRENCE KOEHRSEN CRAIG ; LAWRENCE SAHM WILLIAM CHARLES ; SAHM WILLIAM C ; SAHM WILLIAM CHARLES ; CHARLES SAHM WILLIAM

Inventor(s): CRAIG LAWRENCE KOEHRSEN ; KOEHRSEN CRAIG ; SAHM WILLIAM CHARLES KOEHRSEN CRAIG LAWRENCE ; WILLIAM CHARLES SAHM ; SAHM WILLIAM

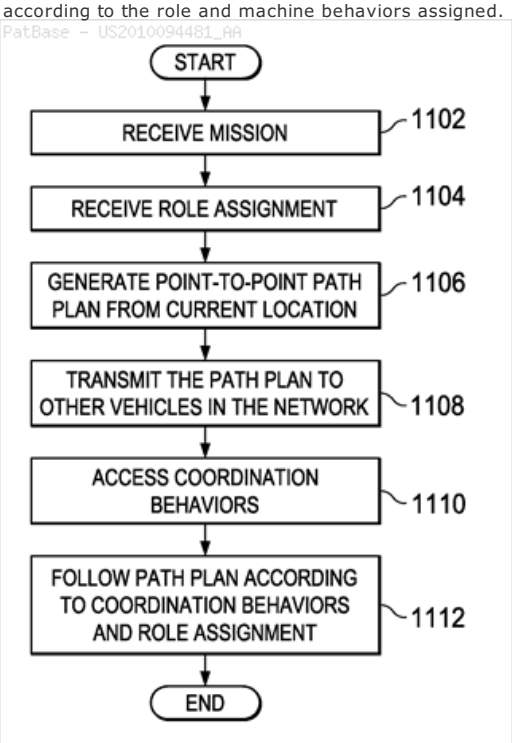
Agent(s): FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; FREEHILLS PATENT AND TRADE MARK ATTORNEYS; STROEM AND GULLIKSSON AB BOX 793 220 07 LUND SE; FINNEGAN HENDERSON FARABOW GARRETT AND DUNNER, LLP; FINNEGAN HENDERSON FARABOW GARRETT AND DUNNER LLP

6) Family number: 44898672 (US2010094481A)

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

Abstract: Source: US2010094481A 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

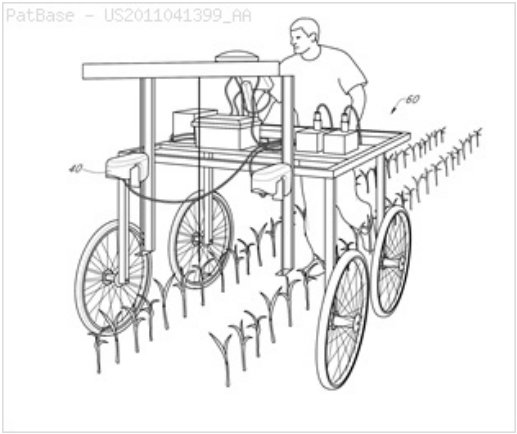
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

7) Family number: 48342036 (US2011041399A)

Title: AUTOMATED SYSTEM FOR ANALYZING PLANT VIGOR

Abstract: Source: US2011041399A A system for evaluating the quality and/or vigor of plants is described. Plants are planted in row sections and a cart is used to pass a radiometric sensor over the row sections. The cart has a radiometric sensor assembly positioned above the row section. Each sensor assembly generates a data signal and a computer receives and stores the data signals. The field cart is positioned above the row sections and measures the existence of plants in the row section and the quantity of vegetation in the row section.

Classifications:
International (IPC 8-9): A01B79/00 A01C11/00 A01D45/00 A01D91/04 A01G1/00 A01G7/00 A01G7/06 A01H1/00 A01H1/02 G01C21/00 G01N21/00 G01N21/17 G01N21/55 G06F19/00 G06K9/00 (Advanced/Invention)
International (IPC 1-7): A01D91/04 G06F19/00 G06K9/00
CPC: A01C11/00 A01D45/00 A01G7/06 A01G1/001 G06F19/00 A01B79/005 A01C21/007 G01C11/02 A01G7/00 G01N21/3151 G01N2021/8466 A01G22/00
European: A01G7/00 G01C11/02 G01N21/31D4 S01N21/84N
US: 1/1 250/226 250/338.1 356/407 356/416 356/432 356/432P 356/445 356/445S 356/72 47/58.1LS 47/58.1R 701/213 701/300 701/469 701/469S 702/19 702/19S 800/260 800/260P



Family:

Publication number	Publication date	Application number	Application date
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AR077904 AA	20110928	AR2010P103072	20100823
AR077905 AA	20110928	AR2010P103073	20100823
BR112012030008 A2	20160802	BR20121130008	20110221
CA2798670 AA	20121106	CA20112798670	20110221
CA2798670 C	20150811	CA20112798670	20110221
CN102917579 A	20130206	CN201180026144	20110221
CN102917579 B	20170405	CN201180026144	20110221
DE602011010102 D1	20141106	DE201160010102T	20110221
EP2575421 A1	20130410	EP20110707370	20110221
EP2575421 B1	20140924	EP20110707370	20110221
IN02794MN2012 A	20140131	IN2012MN02794	20121217
US2011041399 AA	20110224	US20100861613	20100823
US2011043805 AA	20110224	US20100861583	20100823
US2011047636 AA	20110224	US20100861513	20100823
US2013008086 AA	20130110	US20120619996	20120914
US2013019332 AA	20130117	US20120619834	20120914
US2013067808 AA	20130321	US20110700303	20110221
US2015319934 AA	20151112	US20150736612	20150611
US8537360 BB	20130917	US20100861583	20100823
US9075698 BB	20150707	US20110700303	20110221
US9468153 BB	20161018	US20150736612	20150611
WO11022716 A1	20110224	WO2010US46288	20100823
WO11022719 A1	20110224	WO2010US46303	20100823
WO11022722 A1	20110224	WO2010US46315	20100823
WO11147596 A1	20111201	WO2011EP52531	20110221

Priority:

EP20110707370	20110221	US20090235908P	20090821	US20100861583	20100823
US20100373471P	20100813	US20100349018P	20100527	US20100861513	20100823
US20110700303	20110221	WO2010US46288	20100823	WO2011EP52531	20110221
US20120619996	20120914	US20100861613	20100823	US20120619834	20120914
US20150736612	20150611	US20120700303	20121127	WO2011EP52531	20120221

Probable Assignee: SYNGENTA PARTICIPATIONS AG

Assignee(s): (std): BILYEU KEITH ; DOWDEN TAYLOR ; GASS JOHN ; GRENSTEINER DUANE ; GRENSTEINER DUANE A ; SYNGENTA PARTICIPATIONS AG ; STACHON WALTER ; LUEBBERT KEN ; LARSON RYAN ; STROTTMAN JOE ; TERPSTRA KAROLYN ; STACHON WALT ; SYGENTA PARTICIPATIONS AG ; TERPSTRA KAROLYN A

Inventor(s): (std): BILYEU KEITH ; DOWDEN TAYLOR ; GASS JOHN ; GRENSTEINER DUANE ; GRENSTEINER DUANE A ; LARSON RYAN ; LUEBBERT KEN ; STACHON WALT ; STACHON WALTER ; STROTTMAN JOE ; TERPSTRA KAROLYN ; TERPSTRA KAROLYN A

Inventor(s): TERPSTRA KAROLYN CLINTON ; WALT STACHON ; STACHON WALT NORTHFIELD ; KAROLYN TERPSTRA

Agent(s): FETHERSTONHAUGH AND CO; JACOBS BART; DANA REWOLDT,GARST SEED COMPANY; DANA REWOLDT GARST SEED CO; R KODY; REWOLDT DANA

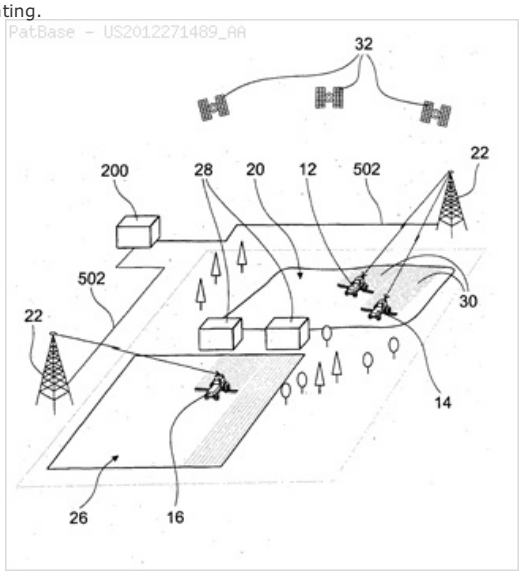
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY 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

8) Family number: 49251639 (US2012271489A)

Title: SYSTEM AND METHOD OF DATA SHARING

Abstract: Source: US2012271489A Agricultural vehicles are guided to prevent overlap of areas operated on by the vehicles. Guidance data is shared between agricultural vehicles by coverage data of area covered by a first agricultural vehicle being wirelessly transmitted to a central server. Download guidance data is generated at the central server using the coverage data received at the central server. The download guidance data is wirelessly transmitted from the server to a second guidance device of a second agricultural vehicle. The second agricultural vehicle uses the download guidance data to not overlap with area covered by the first agricultural vehicle while operating.

Classifications:
International (IPC 8-9): G01C G01C21/00 G05D G05D1/00 G05D1/02 G08G G08G1/00 G08G1/16 H04L29/06 H04L29/08 H04W H04W4/04 (Advanced/Invention);
G01C21/00 G05D1/00 (Core/Invention);
G01C G05D G08G H04W (Subclass/Invention)
International (IPC 1-7): G01C21/00
CPC: G08G1/207 H04L67/1095 H04L67/12 H04L67/18 A01B79/005 G05D1/0297 G05D2201/0201
European: G08G1/20C H04L29/08N17 H04L29/08N9R
US: 701/2



Family:

Publication number	Publication date	Application number	Application date
AR079995 AA	20120307	AR2011P100090	20110112
AU2010342763 AA	20110721	AU20100342763	20101221
AU2010342763 BB	20121101	AU20100342763	20101221
CA2765100 AA	20111209	CA20102765100	20101221
CA2765100 C	20150217	CA20102765100	20101221
CN102656531 A	20120905	CN201080029340	20101221
EP2524269 A1	20121121	EP20100842779	20101221
EP2524269 A4	20130821	EP20100842779	20101221
EP2524269 B1	20170830	EP20100842779	20101221
IN00532KN2012 A	20121012	IN2012KN00532	20120307
MX2012003002 A1	20120419	MX20120003002	20101221
NZ596008 A	20131220	NZ20100596008	20101221
RU2011142832 A	20130710	RU20110142832	20101221
RU2517384 C2	20140527	RU20110142832	20101221
UA103928 C2	20131210	UA20110105592	20101221
US2012271489 AA	20121025	US20100496659	20101221
WO11085430 A1	20110721	WO2010AU01728	20101221
ZA201109247 A	20140528	ZA20110009247	20111215

Priority:
AU20100342763 20101221 AU20100900171 20100115 WO2010AU01728 20101221

Probable Assignee: LEICA GEOSYSTEMS AG

Assignee(s): (std): BAILEY PETER ANDREW ; LEICA GEOSYSTEMS AG ; ROBERTS PETER JAMES

Assignee(s): LEICA GEOSYSTEMS AGHEINRICH-WILD-STRASSECH-9435HEERBRUGGCH ; LEICA GEOSYSTEMS PTY LTD

Inventor(s): (std): ANDREW BAILEY PETER ; BAILEY PETER ANDREW ; JAMES ROBERTS PETER ; ROBERTS PETER JAMES

Inventor(s): ROBERTS PETER JAMESAU ; PETER ANDREW BAILEY ; PETER JAMES ROBERTS ; BAILEY PETER ANDREWAU

Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; BORDEN LADNER GERVAIS LLP; KAMINSKI HARMANN

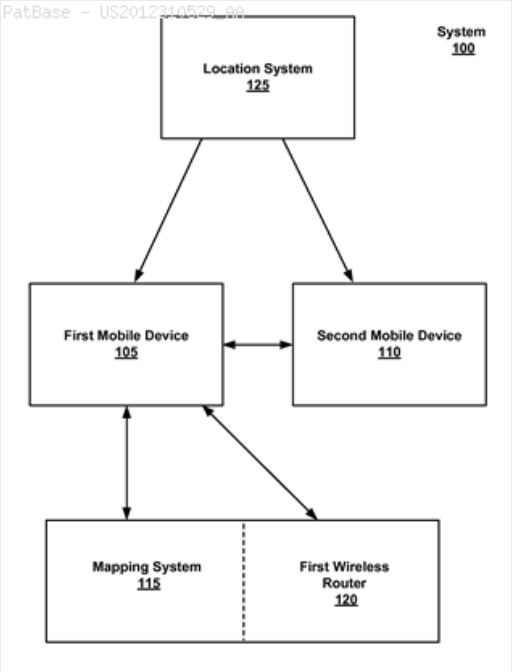
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY 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

9) Family number: 52533841 (US2012310529A)

Title: METHOD AND SYSTEM FOR EXCHANGING DATA

Abstract: Source: US2012310529A A system for exchanging data. A first mobile device configured to generate a first set of data related to a plurality of geographic positions where the first mobile device has been located and configured to exchange the first set of data with a second mobile device wherein the first mobile device receives a second set of data related to a plurality of geographic positions where the second mobile device has been located. A mapping system configured to receive the first set of data and the second set of data and to generate a map based on the first set of data and the second set of data.

Classifications:
International (IPC 8-9): G01C21/00 G01C21/10 G01C21/32 G01S1/00 G06F19/00 G06G7/70 G06Q10/00 H04M3/42 H04W24/00 H04W74/00 (Advanced/Invention)
CPC: G01C21/206 G01C21/32 G06Q10/06
US: 455/414.2 455/455 455/456.1 701/117 701/119 701/408 701/433 701/434 701/482 701/500 705/305



Family:

Publication number	Publication date	Application number	Application date
US2012310529 AA	20121206	US20110149364	20110531
US2012310532 AA	20121206	US20110247788	20110928
US8639434 BB	20140128	US20110247788	20110928
US8818721 BB	20140826	US20110149364	20110531

Priority:

US20110149364 20110531 US20110247788 20110928

Probable Assignee: TRIMBLE NAVIGATION LTD

Assignee(s): (std): ATKINS BENEDICT J G ; CAMERON JOHN F ; DRAKE JEFFREY H ; HAMILTON JEFFREY A ; JONES EDWARD F ; TRIMBLE NAVIGATION LTD ; SNOECK JEROEN

Inventor(s): (std): JONES EDWARD F ; SNOECK JEROEN ; HAMILTON JEFFREY A ; DRAKE JEFFREY H ; CAMERON JOHN F ; ATKINS BENEDICT J G