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(54) **SYSTEM AND METHOD FOR PRIORITIZING FOR DISPLAY ATTRIBUTE DATA ON AN ATTRIBUTE MAP**

(52) **U.S. Cl.**

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(57)

ABSTRACT

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A system and method for prioritizing for display attribute data on an attribute map is herein disclosed. In this embodiment, the method for prioritizing for display attribute data on an attribute map can comprise the step storing in a data store a shape within a geographic region. The shape linked with attribute data. The attribute data comprising a first attribute entries for the shape regarding a first attribute. The attribute data further comprising second attribute entries relating to a second attribute. Additionally, the method further comprising the steps determining a priority first attribute entry based a first characteristic of the second attribute entries and displaying on an attribute map on a screen the shape comprising one a first visual representation based on one of the second priority entries having a database relationship to the priority first database entry.

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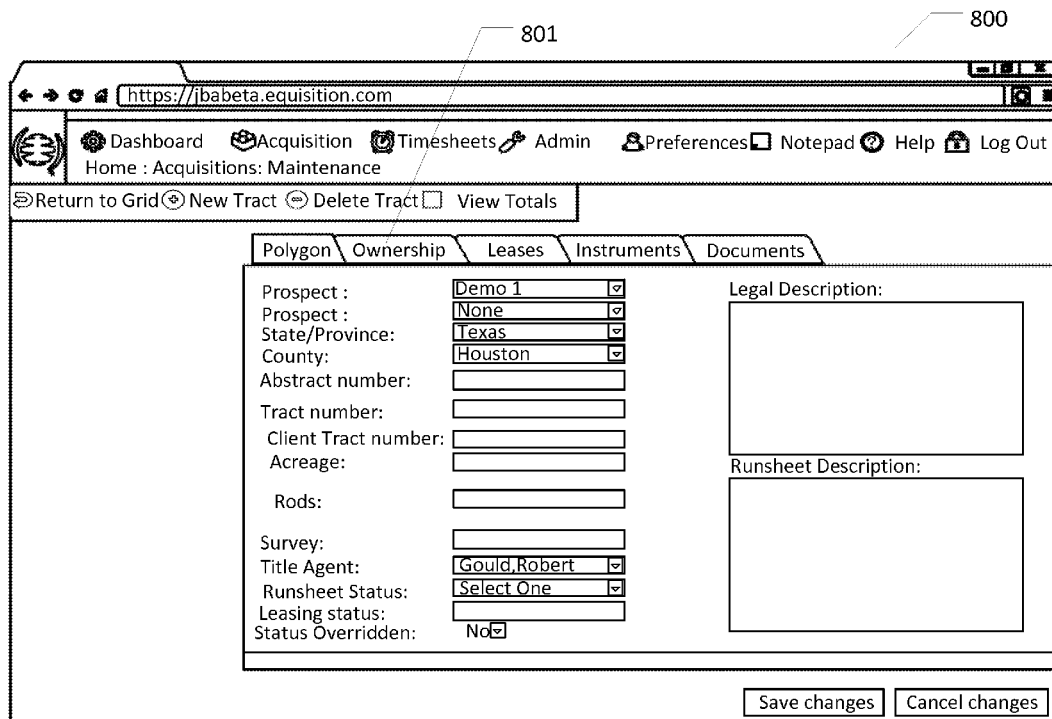
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G06F 17/24 (2006.01)



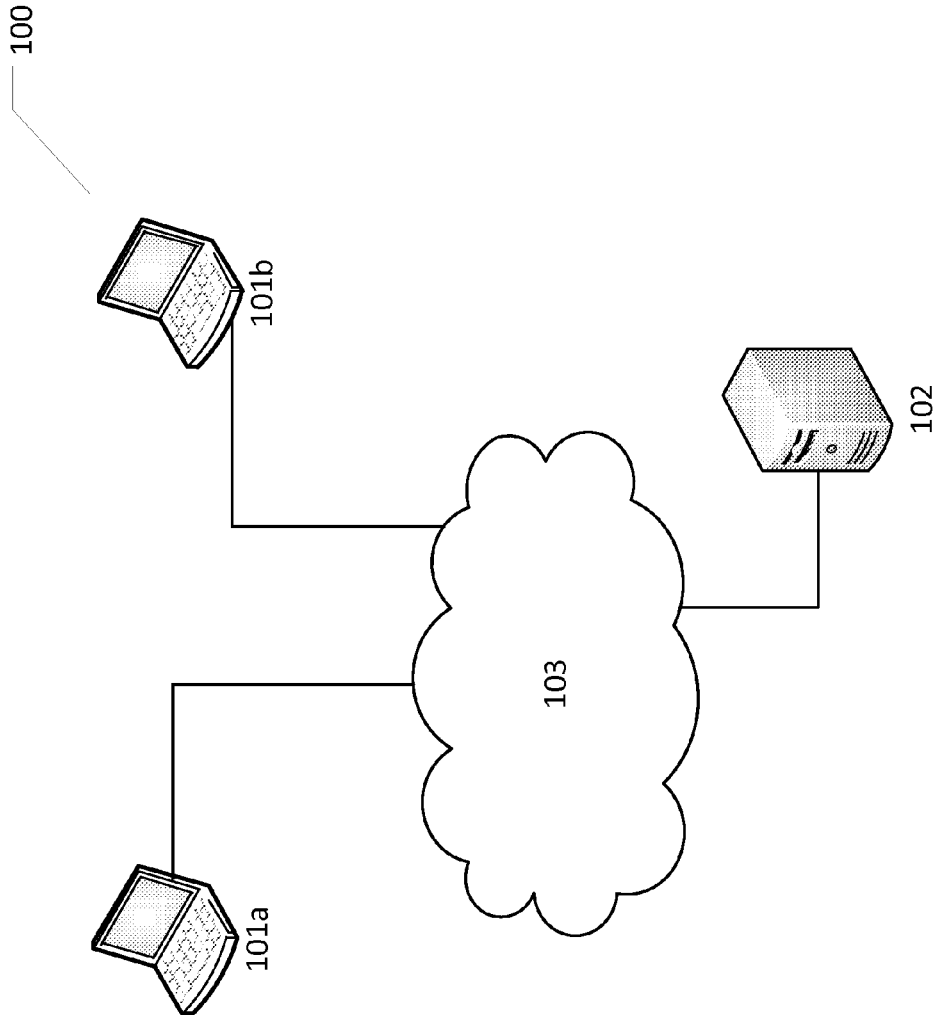


Fig. 1

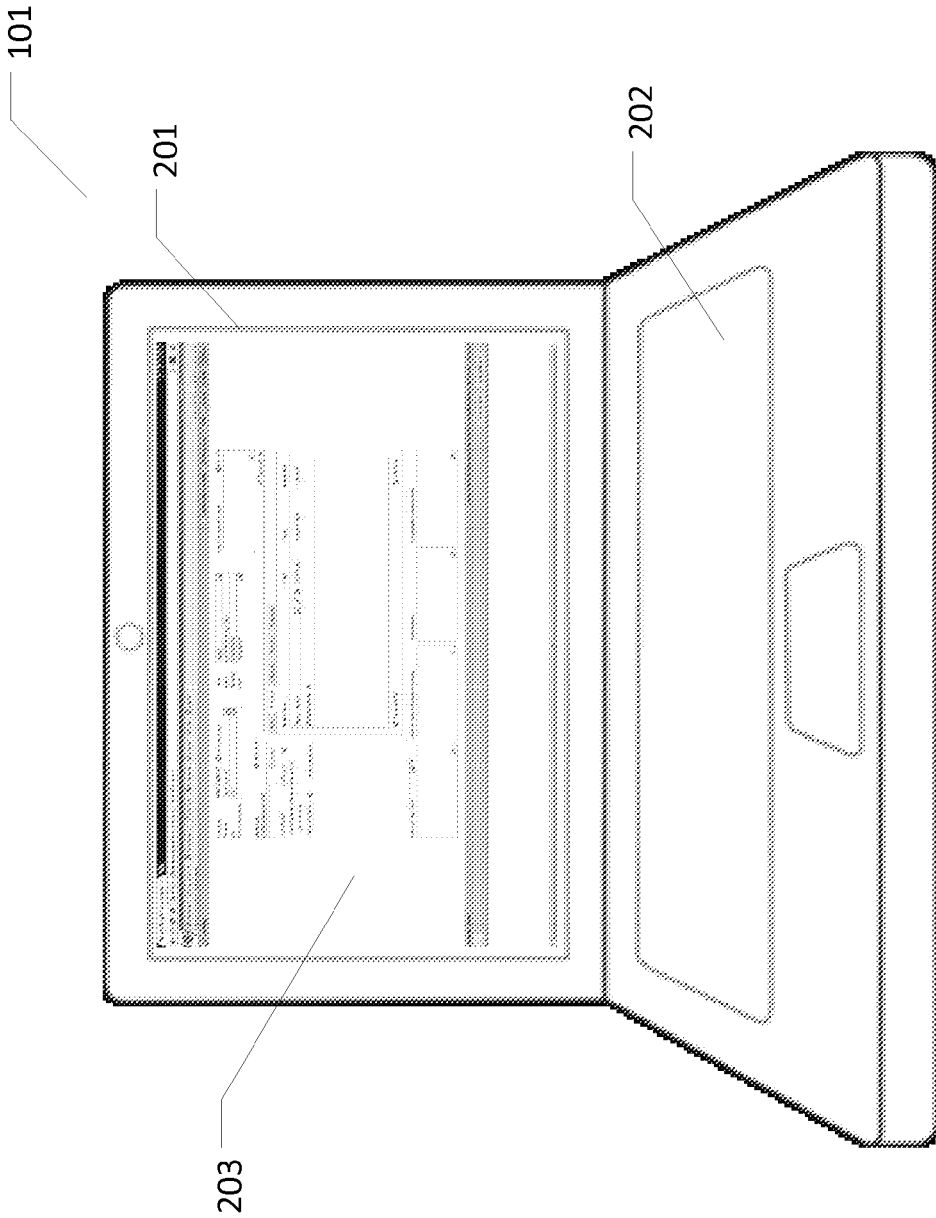


Fig. 2

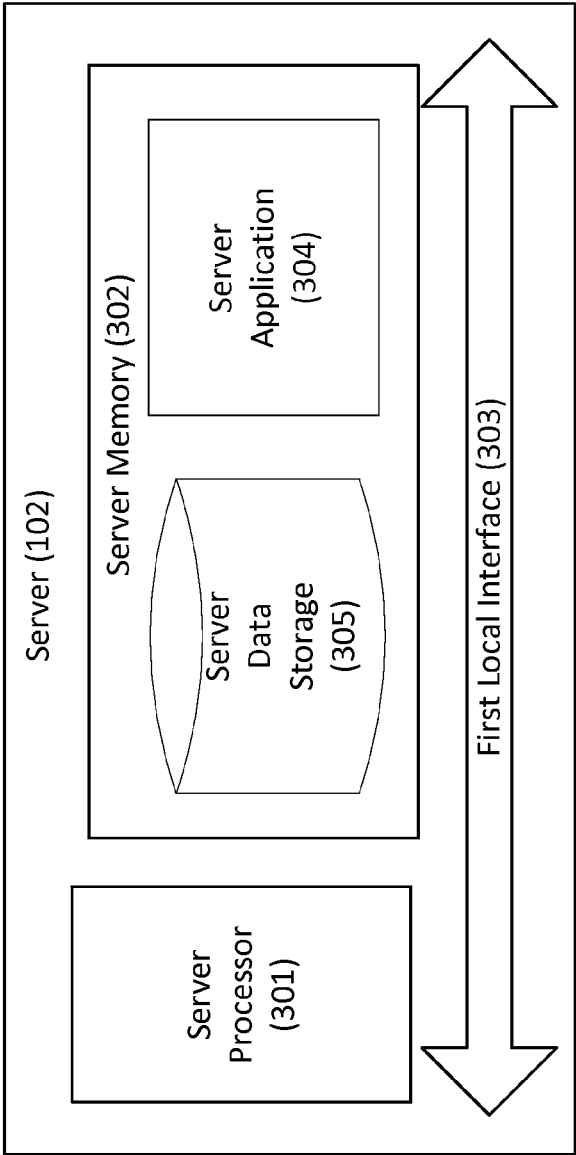


Fig. 3



Fig. 4



Fig. 5

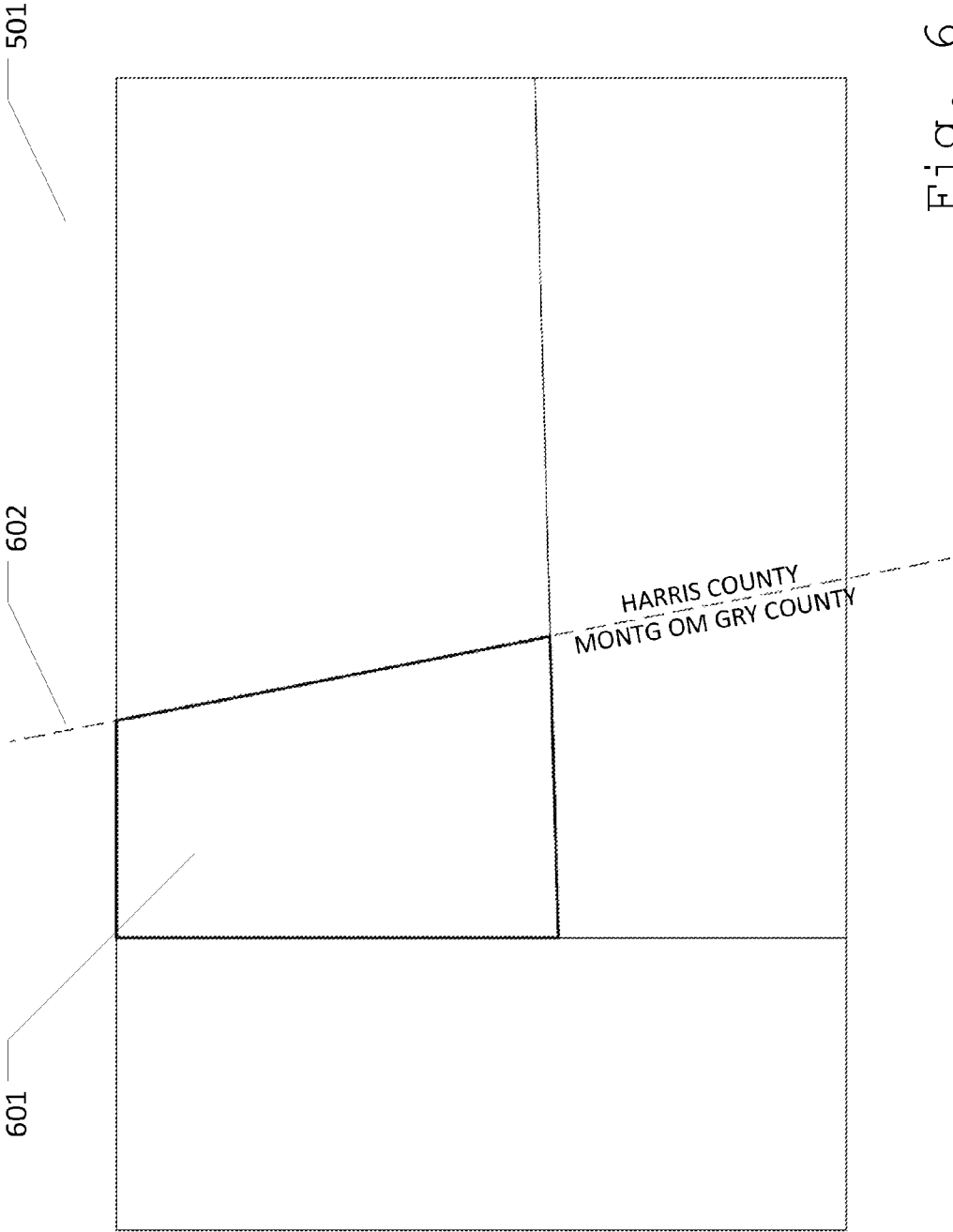


Fig. 6

700

701

County	Abstract	Tract	Owner	Percent	Lessee	Lease Percent	Lease Expiration	Offset (Ft)	Offset (Days)
103	501	1	Adams	100%	Smith, Inc.	0.88	12/31/2013	1500	30
103	501	2	Barker	100%	Smith, Inc.	0.88	1/1/2015	1000	45
103	501	3	Chang	100%	Smith, Inc.	0.88	6/1/2015		
103	501	4	Dunn	100%	Smith, Inc.	0.88	2/3/2017		
103	503	5	Egg	100%	Smith, Inc.	0.88	1/1/2015		
103	503	6	Fi	100%	Smith, Inc.	0.88	6/5/2018		
103	503	7	Garr	100%	Smith, Inc.	0.88	5/3/2015	2000	60
103	503	8	Harper	100%	Smith, Inc.	0.88	4/2/2015	1000	90
103	501	9	Irving	100%	Smith, Inc.	0.88	6/29/2016		
103	501	10	Jones	100%	Smith, Inc.	0.88	2/4/2016		
103	501	11	Korn	100%	Barnaby, Inc.	0.88	4/3/2015		
103	501	12	Lu	100%	Smith, Inc.	0.88	12/31/2015		
103	501	13	Mann	100%	Barnaby, Inc.	0.88	9/27/2015		
103	504	14	North	100%	Smith, Inc.	0.88	4/2/2016	1000	30
103	504	15	Oliver	100%	Barnaby, Inc.	0.88	7/16/2015		
103	504	16	Pratt	100%	Smith, Inc.	0.88	12/15/2013		
103	504	17	Qi	100%	Smith, Inc.	0.88	2/28/2015		
103	504	18	Rogers	100%	Smith, Inc.	0.88	3/1/2015		
103	504	19	Singer	100%	Smith, Inc.	0.88	4/2/2017		
103	504	20	Tan	100%	Smith, Inc.	0.88	5/15/2015	1000	45
103	504	21	Turner	100%	Smith, Inc.	0.88	12/12/2015	1200	90
103	502	22	Ulysses	100%	Smith, Inc.	0.88	6/6/2016		
103	505	23	Vernon	100%	Smith, Inc.	0.88	12/15/2017		
103	505	24	Wagner	100%	Smith, Inc.	0.88	11/21/2016		
103	507	25	Xi	100%	Barnaby, Inc.	0.88	12/25/2018		
103	505	25	York	100%					
103	506	27	Zero	100%					

Fig. 7

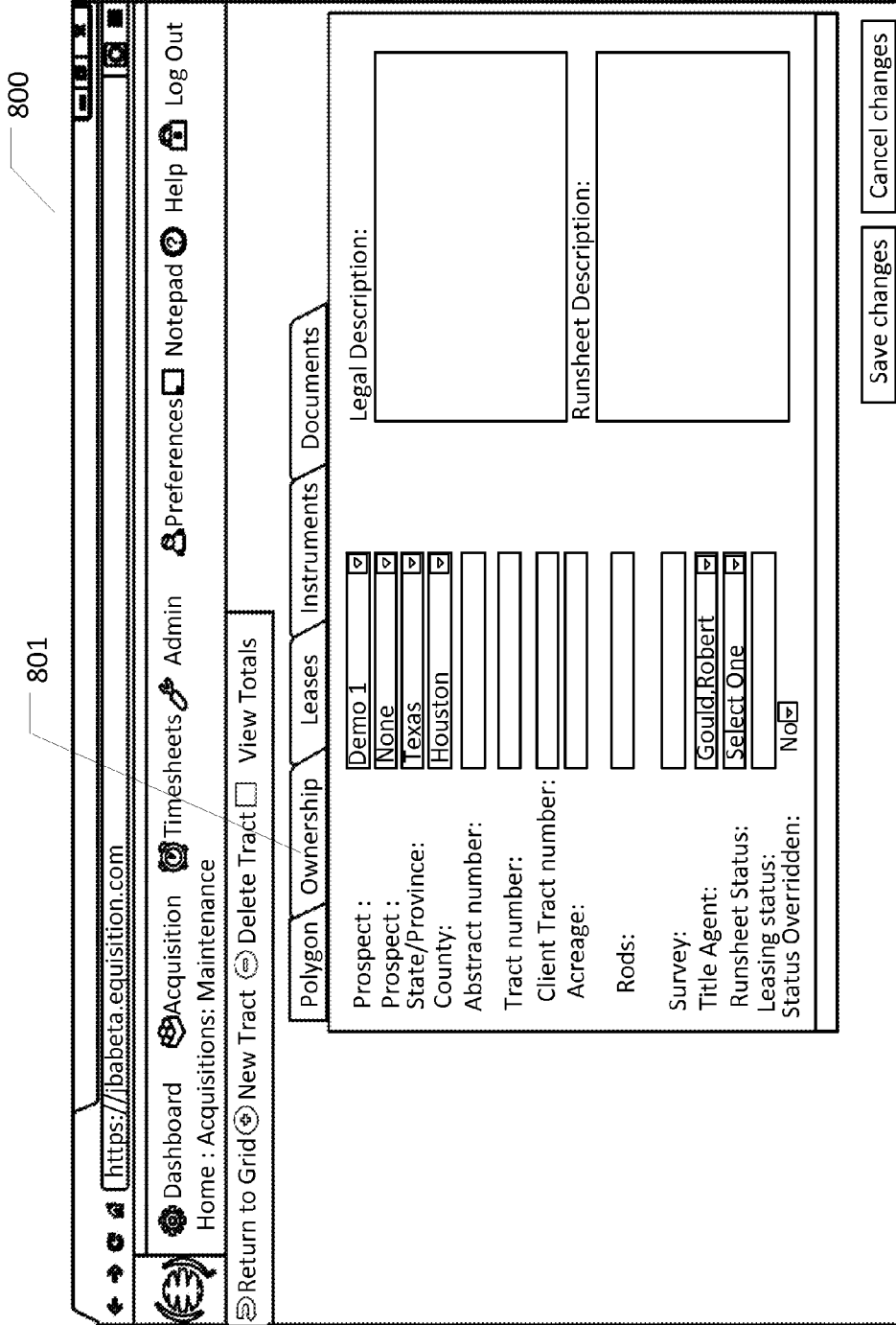


Fig. 8

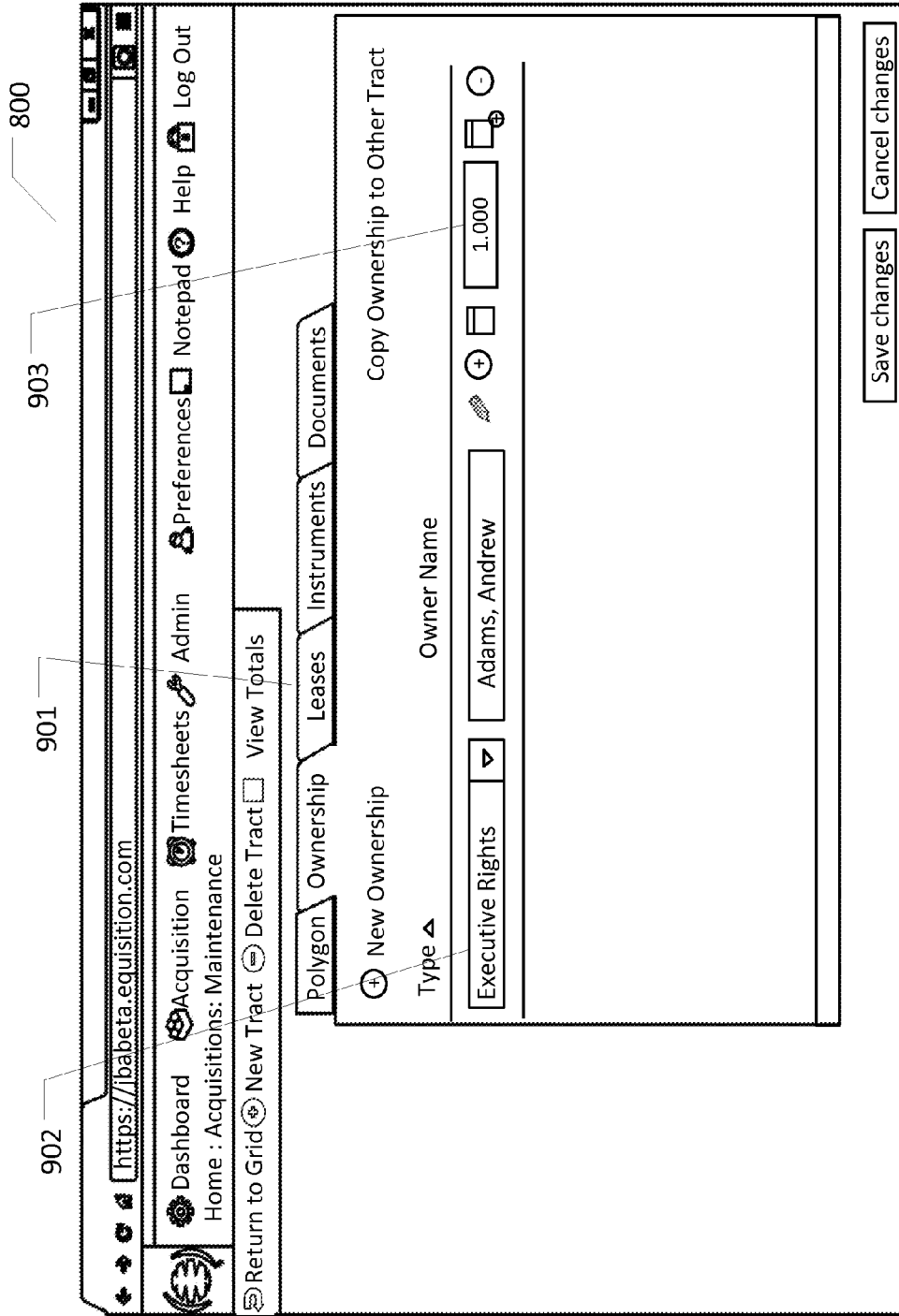


Fig. 9

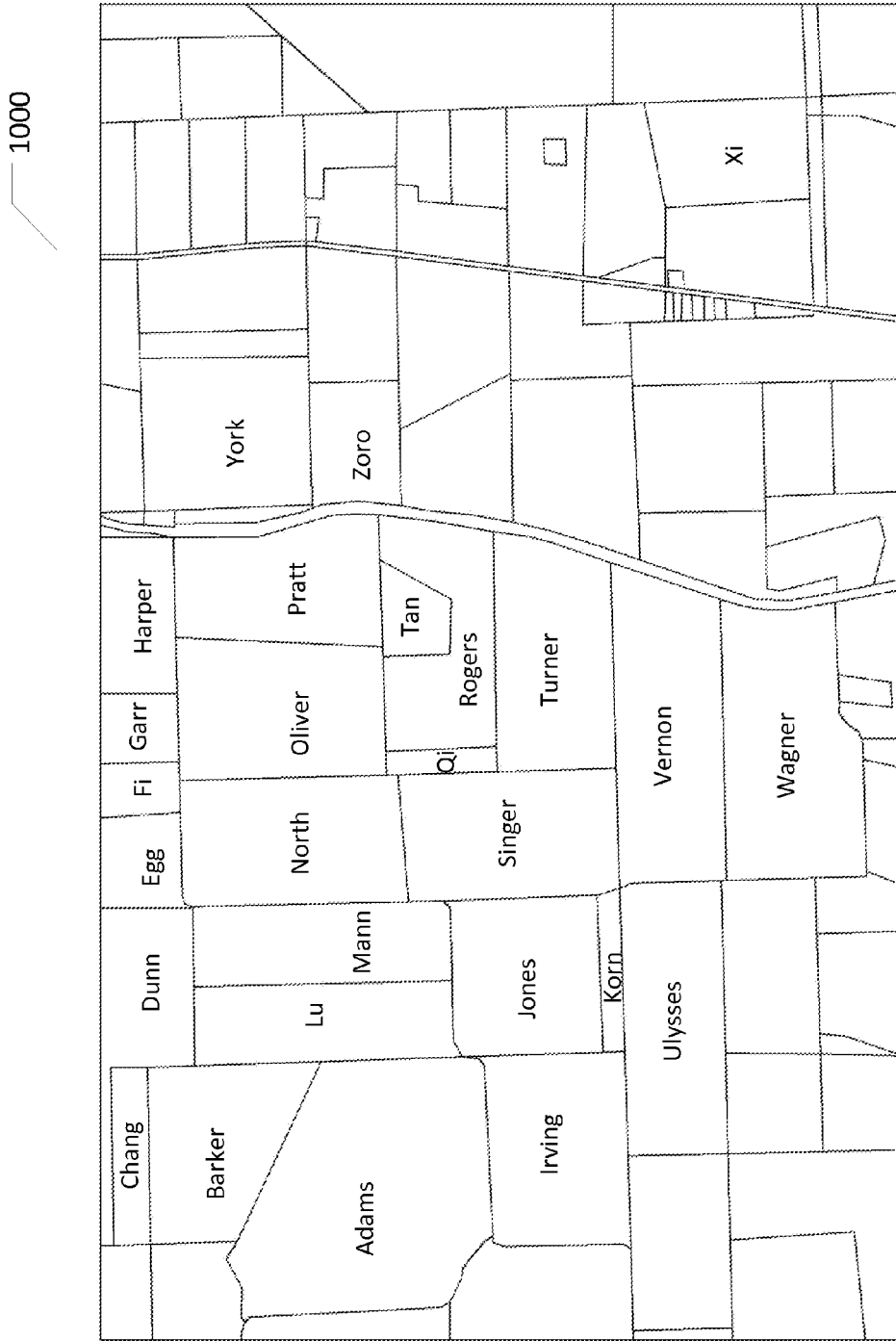


Fig. 10

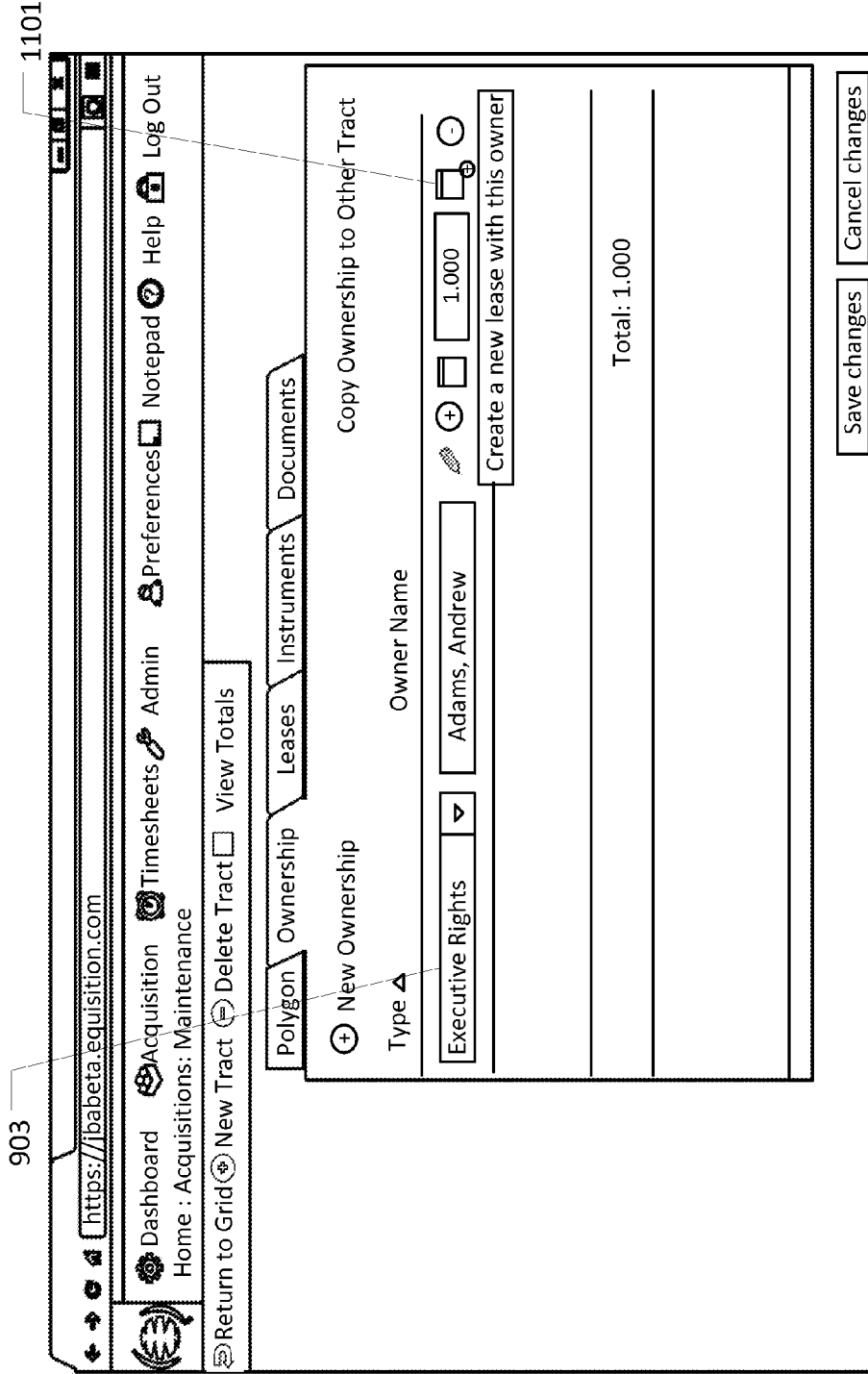


Fig. 11

https://babeta.equisition.com

Dashboard Acquisition Timesheets Admin Preferences Notepad Help Log Out

Home : Acquisitions: Maintenance

Lease Code **00014-02509** Prior Lease Codes

County 103

Abstract 501 23.1075000000

Track 1

Legal Description for lease 92.43 acres, more or less, out of the David Crockett Survey, A-1, Houston County, Texas, being more fully

Basics Ownership Obligations Payments Documents

Owner Name Adams, Andrew

Tract 225-1-100 Executive 1.000 Rights

Follow Up Flag

1202

Fig. 12

1301

Navigation: Dashboard, Home: Acquisitions: Maintenance, Return to Grid, New Tract, Delete Tract, View Totals, Polygon, Ownership, Leases, Instruments, Documents

Content: (+) New Lease
Lease: 53844 / 00012-02474 Owner On Lease Leased
Adams, Andrew 1/1: 1.000

Fig. 13

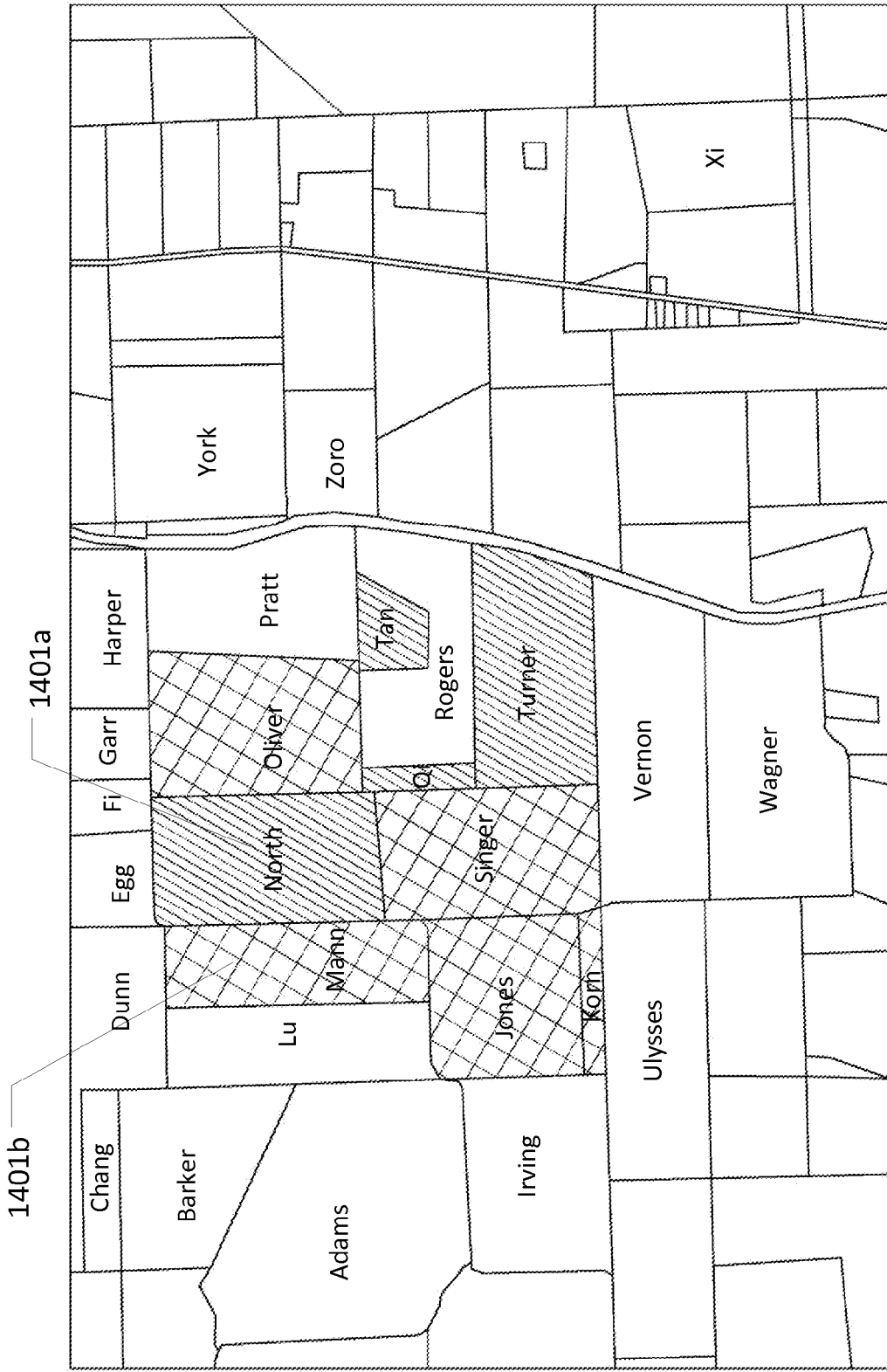


Fig. 14



Fig. 15

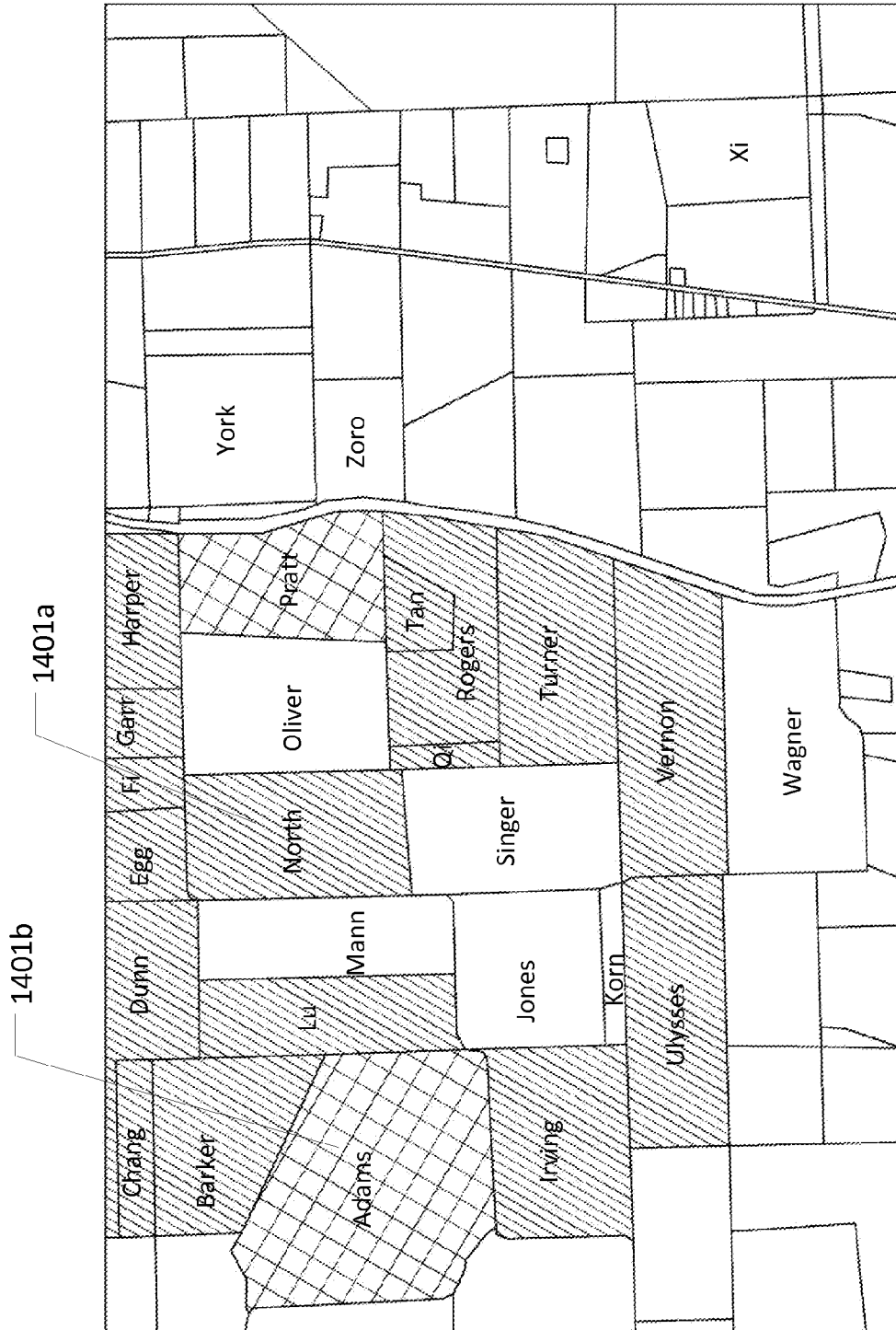


Fig. 16



Fig. 17A

Location	Type	Owner	Establishment Date
140.12,23.21	Drilling Rig	Barnaby, LLC	10/15/13

Fig. 17B

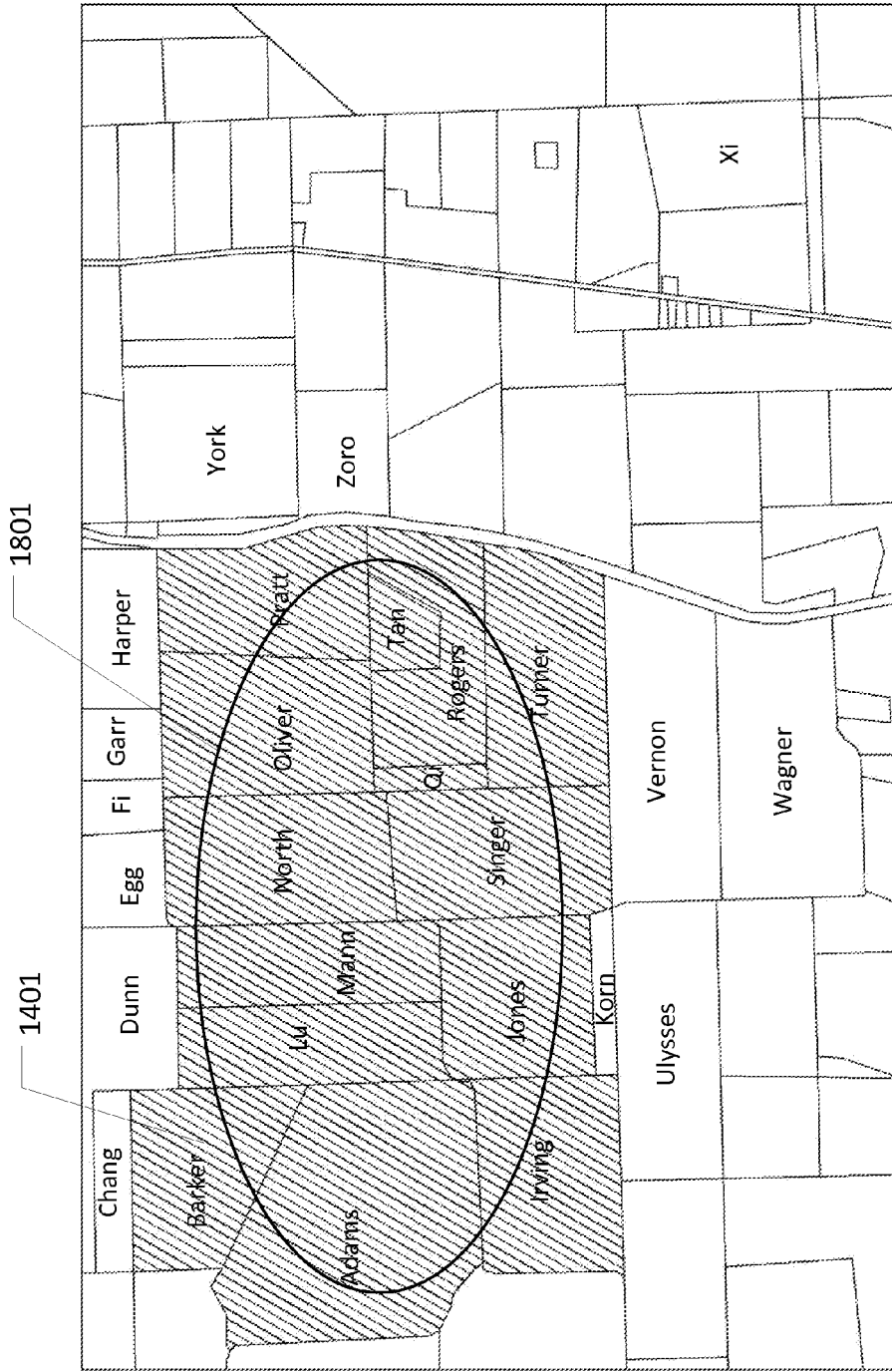


Fig. 18

402

603

701

County	Abstract	Tract	Owner	Percent	Lessor	Lease Percent	Lease Expiration	Offset (ft)	Offset (Days)
103	501	1	Adams	50%	Smith, Inc.	0.88	12/31/2013	500	60
103	501	1	Azark	20%	Barnaby, Inc.	0.88	11/12/2013		
103	501	1	Aaron	10%					
103	501	1	Austin	10%					
103	501	1	Anderson	10%	Smith, Inc.	0.88	6/5/2018	1000	90

Fig. 19

**SYSTEM AND METHOD FOR PRIORITIZING
FOR DISPLAY ATTRIBUTE DATA ON AN
ATTRIBUTE MAP**

BACKGROUND

[0001] This disclosure relates to a system and method for prioritizing for display attribute data on an attribute map. Such discussion of prioritizing for display attribute data on an attribute map is solely exemplary, and not limiting.

[0002] Methods for keeping tract of land title information and tract index information have evolved over the years. Previous methods for displaying lease provisions included taking a spreadsheet of data and hand-drawing tracts, as well as possibly numbering them. Then, a title history search needed to be conducted on each individual tract to determine ownership percentages. Since such processes cost time and money, accounting for resources spent per tract has been necessary as well. Costs for negotiating and contracting with leaseholders represented on hand-drawn tracts also need to be taken into account.

[0003] Additionally, previous methods have included compiling all information regarding title, and leases in multitudes of document formats, such as .pdf, .rtf, .xls and .doc files. In the context of oil and gas title research, as various inputs from landmen in different geographical locations submit title history and lease information, their data is submitted in various formats and contain variances and inconsistencies in the data itself due to the difference of each Counties methods of recordation. Each tract in a given contract or lease can be labeled or numbered and inputted into a database. Once inputted, each individual tract requires a title search to determine ownership and title issues. Once determined, reports are written for each tract. This requires much time and expense to process.

[0004] Contracting with lessors requires accounting for various tracts of land, boundaries, mineral and surface rights, as well as terms for drilling and various deadlines. Similarly, mortgages and homeownership, legal obligations, title and property issues (easements, covenants) must be accounted for based on property location. Determining lease terms, contract expirations, lessor rights, and offset provisions, for example, requires searching through title information in databases. Presently, title research, along with the production of title opinions and curing defects can take several months, or even years. Due to overlapping title areas of interest or tracts, and the lack of previously prepared data, there is often duplication of efforts and inefficient allocation of resources.

[0005] However, such current methods are incapable of accommodating a uniform, centralized account of all information for a given geographic location in a timely or real time basis. Knowledge of contract provisions and rights of other private entities not previously or currently contracted with are also lacking, and litigation can result in the lack of coordination of information. In addition to the time needed to collect raw data, significant amounts of time are also spent in analyzing and manipulating information, such as ownership information, related contracts, and other burdens and appurtenances related to the track. As a result, deadlines are often under risk and lease or contract provisions might inadvertently be violated. Furthermore, such information is constantly changing, and needs to be perpetually updated for efficient decision-making. Finally, the vast amount of data that needs to be managed is too diverse and complex to organize merely in columns and rows of spreadsheets. The current system of assimilation and manipulation of data from mul-

iple data sources could not be made in a timely manner or without inordinate allocation of resources.

[0006] As such it would be useful to have a system and method for prioritizing for display attribute data on an attribute map.

SUMMARY

[0007] A system and method for prioritizing for display attribute data on an attribute map is herein disclosed. In this embodiment, the method for prioritizing for display attribute data on an attribute map can comprise the step storing in a data store a shape within a geographic region. The shape linked with attribute data. The attribute data comprising a first attribute entries for the shape regarding a first attribute. The attribute data further comprising second attribute entries relating to a second attribute. Additionally, the method further comprising the steps determining a priority first attribute entry based a first characteristic of the second attribute entries and displaying on an attribute map on a screen the shape comprising one a first visual representation based on one of the second priority entries having a database relationship to the priority first database entry.

[0008] In another embodiment, a system for prioritizing for display attribute data on an attribute map is herein disclosed. The system for prioritizing for display attribute data on an attribute map can comprise a memory, and a processor. The memory comprising an application and a database. The processor that according to instructions of the application stores in the data store a shape within a geographic region. The shape linked with attribute data. The attribute data comprising a first attribute entries for the shape regarding a first attribute. The attribute data further comprising second attribute entries relating to a second attribute. Additionally, according to the instructions of the application on the processor, determines a priority first attribute entry based a first characteristic of the second attribute entries and displays on an attribute map on a screen the shape comprising one a first visual representation based on one of the second priority entries having a database relationship to the priority first database entry.

[0009] Lastly, a non-transitory computer-readable storage medium comprising a computer readable program code embodied therein, wherein the computer readable program code is adapted to be executed to implement the above mentioned method.

BRIEF DESCRIPTION OF THE DRAWINGS

- [0010]** FIG. 1 illustrates a mapping system.
- [0011]** FIG. 2 illustrates a computer.
- [0012]** FIG. 3 illustrates server hardware.
- [0013]** FIG. 4 illustrates a data store.
- [0014]** FIG. 5 illustrates a shape map represented by a map file.
- [0015]** FIG. 6 illustrates map template adjustment.
- [0016]** FIG. 7 illustrates an attribute table.
- [0017]** FIG. 8 illustrates a database management console capable of creating, editing, and/or deleting entries in an attribute data.
- [0018]** FIG. 9 illustrates a data management console with an ownership tab that is open.
- [0019]** FIG. 10 illustrates an attribute map relating to ownership.
- [0020]** FIG. 11 illustrates ownership tab with a lease creation button next to an owner.

[0021] FIG. 12 illustrates a lease creation form.
 [0022] FIG. 13 illustrates an open lease tab.
 [0023] FIG. 14 illustrates attribute map relating to leased property.
 [0024] FIG. 15 illustrates changes to attribute map related to leased property.
 [0025] FIG. 16 illustrates attribute map relating to lease expirations.
 [0026] FIG. 17A illustrates attribute map related to lease offset provisions.
 [0027] FIG. 17B illustrates attribute data comprising to landmark data.
 [0028] FIG. 18 illustrates attribute map related to the location of a mineral formation.
 [0029] FIG. 19 illustrates a portion of attribute table related to polygon comprising multiple owners.

DETAILED DESCRIPTION

[0030] Described herein is a system and method for prioritizing for display attribute data on an attribute map. The following description is presented to enable any person skilled in the art to make and use the invention as claimed and is provided in the context of the particular examples discussed below, variations of which will be readily apparent to those skilled in the art. In the interest of clarity, not all features of an actual implementation are described in this specification. It will be appreciated that in the development of any such actual implementation (as in any development project), design decisions must be made to achieve the designers' specific goals (e.g., compliance with system- and business-related constraints), and that these goals will vary from one implementation to another. It will also be appreciated that such development effort might be complex and time-consuming, but would nevertheless be a routine undertaking for those of ordinary skill in the field of the appropriate art having the benefit of this disclosure. Accordingly, the claims appended hereto are not intended to be limited by the disclosed embodiments, but are to be accorded their widest scope consistent with the principles and features disclosed herein.

[0031] FIG. 1 illustrates a mapping system 100. Mapping system 100 can comprise computers 101, server 102, and a network 103. Computers 101 can include, but are not limited to, desktops, laptops, tablets, and/or mobile devices. Computer 101 can receive and transfer data to network 103. Computer 101 can include, but is not limited to, an office land man computer 101a or a field land man computer 101b. Network 103 can share data with server 102. Server 102 can store, receive and perform logic on data from network 103 and/or computer 101 in mapping system 100.

[0032] FIG. 2 illustrates an embodiment of computer 101. Computer 101 can include, but is not limited to, a screen 201, and a keyboard 202. Other input devices can include track balls, joy sticks, or scroll wheels. Screen 201 can be a mere display output, or can also be a touch screen, allowing for capturing of input data 203. Data 203 to be inputted can include tract information, address, and/or title information, lessor information, which will be discussed further. Data 203 can also include images of maps, ownership information, lease information and/or other information, which will also be discussed further.

[0033] Inputting data 203 can prompt storing of data 203 to server 102. In another embodiment, inputting data 203 can also prompt search inquiry of data 203 already stored in server 102 and/or computer 100. In another embodiment,

inputting data 203 can prompt altering of data 203 already stored to server 102 and/or network 103. Keyboard 202 can comprise a plurality of physical buttons on computer 101, however in an embodiment where screen 201 is a touch screen, keypad 202 can be represented virtually on screen 201.

[0034] FIG. 3 illustrates a schematic block diagram of server 102 according to an embodiment of the present disclosure. Server 102 includes at least one processor circuit, for example, having a processor 301 and a memory 302, both of which are coupled to a local interface 303. To this end, the server 102 can comprise, for example, at least one server, computer or like device. Local interface can comprise, for example, a data bus with an accompanying address/control bus or other bus structure as can be appreciated.

[0035] Stored in memory 302 described herein above are both data and several components that are executable by processor 301. In particular, stored in the memory 302 and executable by processor 301, is a server application 304. For purposes of this disclosure, server application 304 can be one or many applications. Also stored in memory 302 can be a data store 305 and other data. In addition, an operating system can be stored in memory 302 and executable by processor 301, and other applications.

[0036] FIG. 4 illustrates data store 305. Data store 305 can comprise one or more map files 401, attribute data 402, and attribute map definition file 403. Server application 304 can read map file 401 and attribute data 402 in the course of its execution by processor 301. Attribute map definition file specifies one or more map files 401, along with particular data sets from attribute data 402 for the creation of an attribute map, as discussed further below.

[0037] FIG. 5 illustrates a shape map 501 represented by map file 401. Shape map 501 can be displayable on screen 201. Map file 401 can be created by a mapping software application before being stored in data store 305. One example of map file 401 is a spatial database engine file ("SDE file") created by ArcSDE. Another example is a shape file. Map 501 comprises a plurality of shapes 402 represented in map file 401, each shape represented by spatial data. For purposes of this disclosure, shapes 502 can include, but are not limited to, polygons, lines, etc., and can each be an SDE layer.

[0038] FIG. 6 illustrates abstract 601 divided into tracts 602. Shape map 501 comprises a plurality of abstracts 601 divided into one or more tracts 602. Tracts 602 can lie in one county or cross county boundaries or even state boundaries. Abstracts 601 and tracts 602 can relate to historical land grants. However, over time, abstracts 601 and tracts 602 could have been further sub-divided into smaller plots. One type of shape 502 is a polygon 603. For purpose of this disclosure, polygon 603 can be any closed form shape 502 and is not restricted to the strict mathematical definition of a polygon. For example, within this disclosure, polygon 603 can have one or more curved sides. Each tract 602 can be divided into one or more polygons 603.

[0039] FIG. 7 illustrates an attribute table 700. An attribute 701 is any piece of information or data that can be associated with one or more polygons 603. Polygon 603 can each represent the largest contiguous area having the same attributes 701. Each polygon 603 can have a unique identifier to associate attributes 701 with polygon 603. In one embodiment, one or more attributes 701 can be combined to form unique identifier. Attributes 701 can include, but are not limited to, state, county, abstract, tract, land and/or mineral owner name,

property address, lease status, lease expiration, lessor, lessee, and/or lease date, offset provision, offset provision status, geographic relationship to a particular shape **502**, and/or geographic relationship to a particular landmark. In FIG. **6**, tract **602** passes through a county line. Therefore attributes **701** of a first portion of tract **602** are different from a second portion. In this example, the difference is county. One type of unique identifier is a tract code. A tract code can be an alphanumeric combination comprising references to county, abstract and track. As shown in FIG. **6**, second portion of tract would have a different tract code because it lies in a different county. As such, first portion would be enclosed in polygon **603a**, and second portion would be enclosed in polygon **603b**.

[0040] FIG. **8** illustrates a database management console **800** capable of creating, editing, and/or deleting entries in attribute data **402**. In one embodiment, data management console **800** can comprise a plurality of tabs relating to attribute data **402**. In FIG. **8**, a polygon tab **801** is chosen. Polygon tab **801** allows a user to key in a tract code or other unique identifier to link attribute data **402** with a particular polygon **603** in map file **401**. All tabs in data management console **800** relate to the same polygon.

[0041] FIG. **9** illustrates data management console **800** with an ownership tab **901** that is open. Within ownership tab **901**, a user can enter attribute data **402** related to polygon. Polygon **402** can have one owner, as shown in FIG. **9**, or can have a plurality of owners, as will be discussed further. Within ownership tab, an ownership type **902** can be established as well as an owner name **903** and a percentage ownership **903**.

[0042] FIG. **10** illustrates an attribute map **1000** relating to ownership. Using map file **401** and attribute data **402** referenced within attribute map definition file **403**, server application **304** can create attribute map **1000** that displays the owner of each polygon **603**, or group of polygons **603** (such as tracts.)

[0043] FIG. **11** illustrates ownership tab **903** with a first lease creation button **1101** next to an owner. As a non-limiting example, when minerals are found in a geographic area, many companies send land men to the area to attempt to lease the minerals from property owners. By accessing server application **304** using computer **101**, a land man can easily add a lease to data store **305**. In one embodiment, each listed owner on ownership tab **903** can have its own first lease creation button **1101**.

[0044] FIG. **12** illustrates a lease creation form **1202**. By clicking lease creation button **1101**, lease creation form **1202** can be displayed. Lease creation form **1202** can collect information related to a lease such as, but not limited to, lessor, lessee, tract code, address, offset provisions, and/or lease expiration. Portions of lease creation form **1202** can be automatically filled out. For example, the Lessor information can be filled out with the owner's information that is next to the first lease creation button **1101**. Additionally, tract information can be placed into lease creation form. Once lease creation form **1202** is filled out and submitted, such lease information can be added to attribute data **402**. Once in attribute data **402**, lease information can be referenced by one of attribute map definition files **403**. Such file can be used by server application **304** to create attribute map **800** related to leased property, for display on screen **201**.

[0045] FIG. **13** illustrates an open lease tab. By clicking on and therefore opening lease tab, user is able to view recorded leases in attribute data **402**. In lease tab, user can also, in one embodiment, record a new lease by clicking on a second lease creation button **1301**. Similar to first lease creation button

1101, second lease creation button **1301** can also open lease creation form **1202**. Once open, a user can enter lease information including, but not limited to, lessor, lessee, lease expiration, and offset provisions. In one embodiment, server application **304** can verify that lessor is one of a listed owners related to polygon **603** for which user is attempting to attach a lease. If lessor does not match an owner, then server can reject the lease. If lessor does match an owner, server application **304** can allow lease to be included as an attribute of polygon **603**. Lease can also be associated with the owner that matches lessor. In one embodiment, lease creation form can utilize a pull down menu comprising attribute elements related to polygon **603** from the ownership column of attribute data **402**. By doing so, no lease can be created an entered into attribute data **403** that is not validly connected to an owner of polygon **603**.

[0046] FIG. **14** illustrates attribute map **800** relating to leased property. Attribute map **800** displays areas that are leased by a first company and a second company. Shapes **402** leased by first entity or entities can be represented by a first visual representation **1401a**. Shapes **402** leased by a second entity or entities can be represented by a second visual representation **1401b**. There can be as many different visual representations **1401** as is necessary to distinguish entities. For example, if five entities are leasing in the area, attribute map can comprise five unique visual representations **1401**. Visual representations **1401** can include colors, hatching, borderline variations, and can be static representations, or representations such as flashing indicators. As land men enter new leasing information into attribute data **402**, server application can transmit updated attribute data **402** to computers **101** transiently displaying attribute map **800**. In such system, a land man can clearly see work being performed in the geographic area. Such system can benefit its user by allowing it to choose where it should expend human resources, i.e., land men to secure new leases.

[0047] FIG. **15** illustrates changes to attribute map **800** related to leased property. Armed with the knowledge in attribute map **800** of FIG. **14**, land men can target leases most beneficial to its company. As shown in FIG. **14**, the first company is able to lease properties all around the leases of the second property, effectively blocking off the second company from having contiguous leased area.

[0048] FIG. **16** illustrates attribute map **800** relating to lease expirations. Some mineral leases have expiration dates. For example, if a lessor fails to perform some action within a certain period of time such as drilling a well on the property, rights to the minerals reverts back to the property owner. For a company dealing with multiple leases, keeping up with mineral right reversions (lease expirations) can be time consuming and difficult to ascertain which lease expirations are important and which are not. Attribute map **800** in FIG. **15** can display polygons **603** having varying visual representations **1401** depending on whether a lease expiration related to polygon **603** is outside or within a predefined threshold measured from the present date. For example, if a lease for polygon **603** is not set to expire within **90** days, polygon **603** can comprise first visual representation **1401a**. If a lease for polygon **603** is set to expire within **90** days, polygon **603** can comprise second visual representation **1401b**. In one embodiment, shapes can be separated by lease expiration dates using multiple predefined thresholds. For example, lease expirations can be separated by quarters. Polygons **603** having a lease expiration in this quarter can comprise first visual representation **1401a**.

Polygons **603** having a lease expiration in the next quarter can have second visual representation **1401b**. Polygons **603** expiring in the next quarter can have a third, and so on. In such embodiment, leases having no lease expiration or a very distant (outside the bounds of all predetermined thresholds) expiration can have a different visual representation. In another embodiment, thresholds can be supplied by a user.

[0049] FIG. 17A illustrates attribute map **800** related to lease offset provisions. One type of shape **502** can be a landmark **1701**. In one embodiment, landmark **1701** can be included in map file **401**. In another embodiment, landmark **1701** can be stored separately in a landmark file **404**. A landmark file is a special shape file that includes one or more landmarks **1701** along with a geographic reference set that allows it to be positioned with reference to map file **402**. In one embodiment, attribute data can comprise data related to landmarks **1701**. In another embodiment, such data can be kept in a separate landmark attribute data within data store **305**.

[0050] FIG. 17B illustrates attribute data related to landmark **1701**. Data relate to landmark **1701** can include, but is not limited to, landmark type and landmark establishment date. Server application **304** can, using map files and/or landmark file, determine geographic relationships between polygons **603** and landmarks. Examples of geographic relationships can include an overlap, lack of overlap, or a separation distance.

[0051] One example of a landmark type is a mineral extraction point such as an oil well. An offset provision requires a lessor create a mineral extraction point on the leased within a predetermined period of time if another mineral extraction point is established within a predetermined distance from the property. Attribute map **800** of FIG. 17 displays landmark **1701** within the property owned by Rogers. Server application **304** can determine the geographic relation between each polygon **603** having an offset provision and the mineral extraction point. Server application **304** can then compare the distance to an offset provision distance. Polygons **603** having an offset provision and having a geographic relationship to mineral extraction point within its offset provision can be represented on attribute map **800** with first visual representation **1401a**. Other polygons **603** not having such relationship can be represented on attribute map **800** with second visual representation **1401b**. Such geographic relationship for polygon **603**, can in one embodiment, be stored in attribute data **402** as an attribute of polygon **603**.

[0052] FIG. 18 illustrates attribute map **800** related to the location of mineral formation **1801**. Another example of a landmark type is a mineral formation. Server application **304** can determine the geographic relationship, overlap or non-overlap, between polygon **603** and mineral formation **1801**. Polygons **603** overlapping with mineral formation **1801** can be represented on attribute map **800** with first visual representation **1401a**. Polygons **603** not overlapping with mineral formation **1801** can be represented on attribute map **800** with second visual representation **1401b**.

[0053] FIG. 19 illustrates a portion of attribute table **402** related to polygon **603** comprising multiple owners. Sometimes, multiple entries exist for a particular attribute **701** of polygon **603**. For example, polygon **603** may have more than one owner. Each owner can have a different percentage ownership. Further, each owner may separately lease his interest, or a single owner may lease a plurality of partial interests. Each lease can have separate provisions, creating different

attributes **701** associated with polygon **603**. To ensure the most important information gets shown on each map, server application **304** can make decisions. Turning to the data in FIG. 19, although tract 103.501.1 has a plurality of owners, for an attribute map focusing on ownership server application can prefer the owner with the greatest ownership. Regarding lease maps, server application **304** can prefer tracts having a Lessee who is a client of user. It is possible in situations with many owners, that a client-lessee may have leases with a plurality of owners. Each lease could potentially have different terms as shown in FIG. 19. Regarding attribute maps showing lease expirations, server application **304** can prefer earlier expiring leases. For example, on attribute map **800** displaying lease expirations, for tract 103.501.1, for Smith leases, server application **304** can use the expiration date for the Adams lease instead of the Anderson lease because it is an earlier expiration date. For attribute map **800** relating to offset provisions, server application **304** first can determine which provisions landmark **1701** occurring within the offset distance activates. Among the activated provisions, server application **304** can choose the one with the earliest expiration date. As an example, suppose landmark **1701** is 750 feet away. The only active offset provision that would be activated would be the offset provision related to the Anderson lease. As such, it would be the offset provision considered for attribute map **800**. However, if landmark **1701** is 450 feet away, then both offset provisions are active, and proper offset provision could be chosen by shortest amount of days to cure offset. In the example just mentioned, the Adams lease would be represented on attribute map because it is active and has the shortest offset time period.

[0054] It is understood that there can be other applications that are stored in memory **302** and are executable by processor **301** as can be appreciated. Where any component discussed herein is implemented in the form of software, any one of a number of programming languages can be employed such as, for example, C, C++, C#, Objective C, Java, JavaScript, Perl, PHP, Visual Basic, Python, Ruby, Delphi, Flash, or other programming languages.

[0055] A number of software components can be stored in memory **302** and can be executable by processor **301**. In this respect, the term "executable" means a program file that is in a form that can ultimately be run by processor **301**. Examples of executable programs can be, for example, a compiled program that can be translated into machine code in a format that can be loaded into a random access portion of memory **302** and run by processor **301**, source code that can be expressed in proper format such as object code that is capable of being loaded into a random access portion of memory **302** and executed by processor **301**, or source code that can be interpreted by another executable program to generate instructions in a random access portion of memory **302** to be executed by processor **301**, etc. An executable program can be stored in any portion or component of memory **302** including, for example, random access memory (RAM), read-only memory (ROM), hard drive, solid-state drive, USB flash drive, memory card, optical disc such as compact disc (CD) or digital versatile disc (DVD), floppy disk, magnetic tape, or other memory components.

[0056] Memory **302** is defined herein as including both volatile and nonvolatile memory and data storage components. Volatile components are those that do not retain data values upon loss of power. Nonvolatile components are those that retain data upon a loss of power. Thus, memory **302** can

comprise, for example, random access memory (RAM), read-only memory (ROM), hard disk drives, solid-state drives, USB flash drives, memory cards accessed via a memory card reader, floppy disks accessed via an associated floppy disk drive, optical discs accessed via an optical disc drive, magnetic tapes accessed via an appropriate tape drive, and/or other memory components, or a combination of any two or more of these memory components. In addition, the RAM can comprise, for example, static random access memory (SRAM), dynamic random access memory (DRAM), or magnetic random access memory (MRAM) and other such devices. The ROM can comprise, for example, a programmable read-only memory (PROM), an erasable programmable read-only memory (EPROM), an electrically erasable programmable read-only memory (EEPROM), or other like memory device.

[0057] Also, processor **301** can represent multiple processor **301S** and memory **302** can represent multiple memories that operate in parallel processing circuits, respectively. In such a case, local interface **303** can be an appropriate network, including network **103** that facilitates communication between any two of the multiple processor **301S**, between any processor **301S** and any of the memories, or between any two of the memories, etc. Local interface **303** can comprise additional systems designed to coordinate this communication, including, for example, performing load balancing. processor **301** can be of electrical or of some other available construction.

[0058] Although server application **304**, and other various systems described herein can be embodied in software or code executed by general purpose hardware as discussed above, as an alternative the same can also be embodied in dedicated hardware or a combination of software/general purpose hardware and dedicated hardware. If embodied in dedicated hardware, each can be implemented as a circuit or state machine that employs any one of or a combination of a number of technologies. These technologies can include, but are not limited to, discrete logic circuits having logic gates for implementing various logic functions upon an application of one or more data signals, application specific integrated circuits having appropriate logic gates, or other components, etc. Such technologies are generally well known by those skilled in the art and, consequently, are not described in detail herein.

[0059] In the context of the present disclosure, a “computer-readable storage medium” can be any medium that can contain, store, or maintain the logic or application described herein for use by or in connection with the instruction execution system. The computer-readable storage medium can comprise any one of many physical media such as, for example, electronic, magnetic, optical, electromagnetic, infrared, or semiconductor media. More specific examples of a suitable computer-readable storage medium would include, but are not limited to, magnetic tapes, magnetic floppy diskettes, magnetic hard drives, memory cards, solid-state drives, USB flash drives, or optical discs. Also, the computer-readable storage medium can be a random access memory (RAM) including, for example, static random access memory (SRAM) and dynamic random access memory (DRAM), or magnetic random access memory (MRAM). In addition, the computer-readable storage medium can be a read-only memory (ROM), a programmable read-only memory (PROM), an erasable programmable read-only memory

(EPROM), an electrically erasable programmable read-only memory (EEPROM), or other type of memory device.

[0060] It should be emphasized that the above-described embodiments of the present disclosure are merely possible examples of implementations set forth for a clear understanding of the principles of the disclosure. Many variations and modifications can be made to the above-described embodiment(s) without departing substantially from the spirit and principles of the disclosure. All such modifications and variations are intended to be included herein within the scope of this disclosure and protected by the following claims.

[0061] Various changes in the details of the illustrated operational methods are possible without departing from the scope of the following claims. Some embodiments may combine the activities described herein as being separate steps. Similarly, one or more of the described steps may be omitted, depending upon the specific operational environment the method is being implemented in. It is to be understood that the above description is intended to be illustrative, and not restrictive. For example, the above-described embodiments may be used in combination with each other. Many other embodiments will be apparent to those of skill in the art upon reviewing the above description. The scope of the invention should, therefore, be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled. In the appended claims, the terms “including” and “in which” are used as the plain-English equivalents of the respective terms “comprising” and “wherein.”

1. A method for prioritizing for display attribute data on an attribute map comprising
 - storing in a data store a shape within a geographic region, said shape linked with attribute data, said attribute data comprising a first attribute entries for said shape regarding a first attribute, said attribute data further comprising second attribute entries relating to a second attribute
 - determining a priority first attribute entry based a first characteristic of said second attribute entries
 - displaying on an attribute map on a screen said shape comprising one a first visual representation based on one of said second priority entries having a database relationship to said priority first database entry.
2. The method of claim 1 wherein said first attribute is ownership.
3. The method of claim 2 wherein said second attribute is ownership percentage.
4. The method of claim 3 wherein said attribute map is an ownership map
5. The method of claim 1 wherein said first attribute is lessees.
6. The method of claim 5 wherein said second attribute is lease expirations.
7. The method of claim 6 wherein said attribute map relates to lease expirations.
8. The method of claim 5 wherein said second attribute data further comprises third attribute entries related to a third attribute; further wherein said determining said priority first attribute entry is further based on a second characteristic of said third attribute entries, further wherein said first visual representations is further based on of said second priority entries having a database relationship to said priority first database entry.

9. The method of claim 8 wherein said second attribute is an offset provision distance and said third attribute is an offset provision deadline.

10. A non-transitory computer-readable storage medium comprising a computer readable program code embodied therein, wherein the computer readable program code is adapted to be executed to implement the method of claim 1.

11. A system for prioritizing for display attribute data on an attribute map, comprising

a memory comprising an application and a data store; and a processor that, according to instructions of said application

stores in said data store a shape within a geographic region, said shape linked with attribute data, said attribute data comprising a first attribute entries for said shape regarding a first attribute, said attribute data further comprising second attribute entries relating to a second attribute

determines a priority first attribute entry based a first characteristic of said second attribute entries

displays on an attribute map on a screen said shape comprising one a first visual representation based on one of said second priority entries having a database relationship to said priority first database entry.

12. The system of claim 1 wherein said first attribute is ownership.

13. The system of claim 2 wherein said second attribute is ownership percentage.

14. The system of claim 3 wherein said attribute map is an ownership map

15. The system of claim 1 wherein said first attribute is lessees.

16. The system of claim 5 wherein said second attribute is lease expirations.

17. The system of claim 6 wherein said attribute map relates to lease expirations.

18. The system of claim 5 wherein said second attribute data further comprises third attribute entries related to a third attribute; further wherein said determining said priority first attribute entry is further based on a second characteristic of said third attribute entries, further wherein said first visual representations is further based on of said second priority entries having a database relationship to said priority first database entry.

19. The system of claim 8 wherein said second attribute is an offset provision distance and said third attribute is an offset provision deadline.

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