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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	57442/10-351
	Application Number	
Title of Invention	SYSTEM AND METHOD FOR DATA MANAGEMENT	

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Applicant 1 Remove

Applicant Authority ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
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Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

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All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

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Application Information:

Title of the Invention	SYSTEM AND METHOD FOR DATA MANAGEMENT		
Attorney Docket Number	57442/10-351	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		Suggested Figure for F	

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

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in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

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Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	10643516	2003-08-19
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
10643516	non provisional of	60404491	2002-08-19

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Application Number	Country [i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
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Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1 Remove

If the Assignee is an Organization check here. ☒

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Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button. Add

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/scott r. zingerman/			Date (YYYY-MM-DD)	2010-10-22
First Name	Scott	Last Name	Zingerman	Registration Number	35422

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METHOD AND SYSTEM FOR DATA MANAGEMENT

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of U.S. Provisional Application No. 60/404,491 filed August 19, 2002, and is a continuation of co-pending U.S. Application No. 10/643,516 filed on August 19, 2003, scheduled to issue as U.S. Patent No. 7,822,816 on October 26, 2010, herein incorporated by reference in its entirety for all purposes.

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0002] The present invention relates to a system of computing devices for the collection and management of information. More particularly, but not by way of limitation, the present invention relates to a system for collecting and managing information including a plurality of computer devices loosely networked to a server and an operating system for a computer which provides a number of features favorable for use in the inventive system.

2. Background of the Invention

[0003] Virtually all business software applications involve the collection of information in some form or another. Where information is gathered away from the convenience of a desktop, workers have traditionally entered the information on paper forms. This data is then entered into a computer in a second step. This extra step leads to delays and

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inaccuracies which are costly and, more importantly, unnecessary.

[0004] Handheld computers are well known in the art. In fact such computers are presently available from numerous manufacturers offering a vast assortment of operating systems and hardware configurations. While such devices come in a host of variations, generally handheld computers include an LCD display, a method for gathering manual input, storage, and a variety of machine interfaces, i.e., an IR link, a USB port, a serial port, etc.

[0005] As with their desktop, and laptop counterparts, a handheld computer will also include an operating system which provides an operator interface, file management, and standardized I/O, as well as facilitating the running of application programs. Thus far, handheld operating systems mimic those of desktop and laptop systems, despite the fact that handheld devices are typically used in a different manner and have radically different resources.

[0006] As with other types of computers, handheld computers suffer from compatibility issues, especially in the operation of application programs. Generally speaking, software programs must typically be tailored to a specific family of processors and to a specific operating system. Most applications are developed in a high level language and then compiled for a specific target processor. As different manufacturers select different processors, an application written for one family of processors must be recompiled to execute in a processor of a different family. Even when two manufacturers select compatible processors, if they chose different operating systems, applications written for one device will probably not run correctly on the other device. Since the operating system provides access

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to the various hardware resources and manages the file system, it is almost unfathomable that the operating systems of independent authors would be compatible, unless one specifically set out to copy the other. Thus, particular applications tend to grow up around a particular family of devices which share an operating system and, unfortunately, the application may not be available for non-compatible devices.

[0007] Another issue which is common to all computers is the transferability of stored information, specifically, the ability to move files from machine-to-machine. While most handheld computers include an infrared port for communicating with other infrared devices, including other handhelds, files transferred in such a manner may not be usable by software on the receiving device. This is especially true of information formatted for a particular application such as a word processor, spread sheet program, data base manager, or the like.

[0008] To overcome the necessity of compiling a program for a particular machine, an application may be written in an interpreted language, or a language which can be compiled to produce an intermediate language (i.e., a language that falls somewhere between source code and object code) such as i-code or tokens. In such a scheme, each device is provided with a run-time package which can execute the compiled i-code or tokens, the run-time package having been written for that particular device, thus, only the run-time package needs to be modified in order to port a program to a new computing environment. Once the run-time package is installed, any application authored in the language and which has been compiled to i-code will run on the target device. Unfortunately, such languages typically

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lack effective optimization and generally do not provide a broad range of support for hardware resources. Regardless of the language selected, whether compiled, interpreted, or whatever, software coding requires at least a nominal degree of programming skill to create the application program.

[0009] Perhaps because handheld computers are not as evolved as their desktop counterparts, or because it is typically cumbersome to enter information, or maybe due to the lack of a true front-runner in operating systems, handheld computers have not inspired the full range of software products available for larger computers. The result has been a rather limited selection of retail software applications for handheld devices as compared with their desktop counterparts, such software is aimed primarily at organizational tools, e-mail, and games. However, at the other end of the spectrum, custom programs tailored for a specific customer, handheld computers are gaining momentum in replacing manual forms which are often filled-out in remote areas, away from a desktop, i.e. manufacturing inventory, quality inspections, delivery systems, and the like. One reason for the increasing movement toward the use of handheld computers for data gathering tasks is that they can be easily transported to the source of the data and have the information directly entered into them, thereby eliminating the potentially error-prone step of manual data entry of information on previously completed paper forms. Eliminating the extra step additionally saves unnecessary labor, and allows the data to be entered in a more timely fashion.

[0010] Due to their incredible portability, handhelds are particularly well suited to this type of data gathering, despite an obvious lack of software infrastructure in this area.

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The present trend is for a business to commission the authoring of a custom program aimed at a particular need. While the cost of such an application is usually high, the accuracy of the information, the timeliness of the information, and the accessibility of the information are likely worth the cost. In fact, while such systems may seem cost prohibitive to develop, in many cases the actual cost on a per-data-entry basis may prove to be relatively small, especially in light of the timeliness and accuracy associated with real time data collection.

[0011] To develop software for a handheld computer, a custom program is typically developed and tested on a larger system. When the developer is satisfied with the program, it is compiled for a particular target device and transferred to handheld devices through a communication link. If users are using more than one type of device, the same program must be tested and compiled for each type of device. If a change is required, the developer must make the change on the development system and re-transfer the entire program to each target device.

[0012] In a typical data gathering application, information is entered into custom designed forms on the handheld computer. Eventually, the data entered in the handheld finds its way to a database, which is typically located on a server which is accessible to those needing the information or from which it may be accessed by other programs such as accounting systems, materials management programs, etc. Present day servers are well suited to the task of information management and generally provide broad access to and searchability to collected data.

[0013] One problem area in such systems becomes apparent when the data is

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transferred from the handheld to the server. While it would seem that wireless interfaces and handhelds were made for each other, the marriage of the two is not without its own set of problems. Wireless interfaces fall into a number of different categories. At one extreme is the infrared ("IR") port often found on handheld devices. The range of this type of interface is usually limited to a few feet and typically supports transfer rates of 115 kbaud, or less.

[0014] Another method for wireless communication is via a wireless local area network or "WLAN." A typical example of a WLAN is that defined by the IEEE 802.11 standard. When a handheld computer is equipped with a WLAN interface, the device can communicate with other computers also equipped with a WLAN interface, or even computers networked to a WLAN equipped computer by a wired network. Typically, WLAN interfaces provide a range of several hundred feet. As long as a handheld is within the range of another WLAN equipped computer, the network connection is continuous. Wireless local area networks sport data rates from a few thousand bits per second up to at least 52 million bits per second, depending on the particular standard employed.

[0015] Yet another known wireless interface for handheld computers is a CDPD interface, CDMA interface, GSM interface, or similar wireless interface or modem. While there are some variations, these systems are often built around a cellular phone network and provide coverage similar to that of a cellular phone, typically national, or even international, coverage. Such interfaces will experience the same gaps in service as can be expected with a cell phone. While such systems provide an exceptionally wide area of coverage, they typically do so at limited bandwidth, e.g. 19.2 kbaud.

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[0016] Of course handheld devices are not limited to wireless communications. Typically such devices can be connected to another computer through a universal serial bus ("USB") connection, an RS-232 connection, an Ethernet connection on a properly equipped device, or similar hardwired connection. While these interfaces range from moderately paced to the extremely fast, they are exceptionally reliable, at least while the connection is in place. Unfortunately, few environments are well suited to tethering a handheld to allow a continuous wired connection.

[0017] It can be seen that perhaps the greatest drawback to using a handheld for data gathering as part of a larger system are the limitations of the data link: 1) it is unlikely that the data link will always be available; and 2) the bandwidth of most of the practical wireless options is restrictive. Presently there are two methods for dealing with the problem of data link availability. In one scheme, data is transmitted as it is collected. The advantage of such a scheme is that the database is updated in real time and represents current data. The disadvantages are, for all practical purposes, the scheme is limited to systems using a wireless interface and when the wireless link is not operational, generally data cannot be entered.

[0018] Alternatively, entered data can be stored locally on the handheld and transmitted in a batch process when a link is established. The advantage of this system is that it is tolerant of gaps in the communication link and works well with wired transfers of data. Unfortunately, data is not delivered in real time and the data base may be somewhat stale, depending on the length of time between the collection of data and the presence of the

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link.

[0019] The issue of bandwidth may be problematic on several fronts. If programs are updated periodically, the entire program must be sent and the time to reload may be objectionable. In the opposite direction, if large amounts of data are collected, it may be time consuming to send the data collected from the handheld to the server, particularly when performed in a batch fashion.

[0020] It is thus an object of the present invention to provide an operating system for a handheld computer which will allow a program to execute on any handheld computer.

[0021] It is a further object of the present invention to provide an operating system for a handheld computer wherein programming changes will only necessitate incremental transfers of program instructions.

[0022] It is still a further object of the present invention to provide an operating system for a handheld computer wherein files may be transferred among devices without a translation or conversion.

[0023] It is yet a further object of the present invention to provide an operating system for a handheld computer wherein programming steps and data are tokenized to reduce the load on a communication channel of finite bandwidth.

[0024] It is yet a further object of the present invention to provide a system of networked computers in which modifications to a computer program for a remote computer are sent in real time to the remote computer and are implemented immediately and seamlessly without the requirement of user installation.

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SUMMARY OF THE INVENTION

[0025] The present invention provides a system and method for the management of information which solves the problems and alleviates the needs discussed above. In its broadest sense, the present invention is a method designed to accomplish the following:

1) Allow any computer(s) (desktops, laptops, handhelds, portables, etc.) to be used to capture information;

2) Transfer the information to a data center (via file transfer methods such as a network, to include, but not necessarily, Internet based) in a form that the data center can recognize;

3) Allow another computer(s) to access the information and download it from the data center in a format that can be readily used regardless of the format in which the original information was gathered.

[0026] In a preferred embodiment, a server is loosely networked to a plurality of computers (handheld, laptop, or desktop). Each computer is equipped with an operating system which allows common programming to execute on any device, regardless of hardware differences or native operating system differences among the plurality of devices.

[0027] With regard to the present invention, the term "loosely networked" is used to describe a networked computer system wherein devices on the network are tolerant of intermittent network connections and, in fact, tolerant of the type of network connection available. In particular, if any communication connection is available between devices

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wishing to communicate, network transmissions occur normally, in real time. If a network connection is unavailable at that moment, the information is temporarily stored in the device and later transmitted when the connection is restored. Unless otherwise specified, hereinafter the terms "network" or "networked" refer to loosely networked devices.

[0028] Thus, the operating system may be thought of as device indifferent and communication channel indifferent. In the preferred embodiment, any computer can execute any program developed for the inventive system and will communicate with other members of the system through any communication method the device can find available.

[0029] The operating system provided in each computer device allows the use of a common instruction set in any such device, regardless of compatibility issues between the devices, wherein "instruction set" is used herein to mean the commands, tokens, etc., that are recognized by the operating system as valid instructions. Unlike conventional computer programs, the operating system employed in the inventive system allows incremental changes to the program without the need to reload the entire program. Additionally, a programming change made at a central office will automatically propagate to loosely networked computers dispersed throughout the field.

[0030] In one aspect of the invention, branching logic depending on the programs are created for handheld or other computer devices by simply entering questions and providing response specification, in the form of a questionnaire, for the end-user. Thus, no particular programming skill is required to generate programs for data gathering. As will be appreciated by those familiar with data collection, data can be collected by posing a series

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of questions, or otherwise prompting for specific input from the user, as in the manner used with paper forms. A number of useful subsystems, which may already be present in the handheld device, or easily added later, may be utilized so that at least some of the information which is responsive to the designed questionnaire may be collected automatically rather than entered manually, e.g., time and date, position information if the device includes a GPS receiver, etc.

[0031] In another aspect of the present invention, the program and user responses are coded in such a fashion as to substantially reduce the bandwidth requirements of the network connection. Since many of the networking options for handheld devices provide limited bandwidth, best use may be made of the available throughput by coding, or tokenizing, program information and responses.

[0032] In practice, a program is created by entering a series of prompts and providing direction for how the system is to respond to particular responses. This process of data gathering may then be performed by a person having no programming skill whatsoever. The program may then be sent to all, or selected, computer devices on the network. Those devices having a connection may immediately be updated. Those devices in which a network connection is temporarily not available will be updated when the connection is next restored.

[0033] The user of the computer device is then prompted for specific input. As the user enters data, if the network connection is available, the information is immediately sent to the server. If the network connection is unavailable, the information is stored locally in

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the handheld device and sent upon restoration of the network connection. At the server, the information is typically processed upon receipt such that users of the data have real time, or virtually real time, information available.

[0034] In another aspect of the invention, the inventive system may be provided to end users according to an application service provider ("ASP") business method. ASPs are an emerging trend in the computer software industry. Traditionally, a company seeking a software solution would either acquire a preprogrammed package which suits its needs or commission the programming of custom software. In many instances preprogrammed software is unavailable or requires too many compromises to be attractive. In either case, the software is purchased and, invariably, represents a large capital expense to the company. Once purchased, modifications, evolutional upgrades, changing management practices, and the like, result in additional expenses to keep the software up-to-date.

[0035] In contrast an ASP typically provides software on a pay-as-you-go basis. An ASP typically provides custom, or semi-custom software to companies. Each user is billed for the time it uses the software. The advantages to the end user are obvious. There is no crippling up-front expense, modifications and upgrades are the responsibility of the ASP, if the software does not perform satisfactorily the customer simply walks away and never incurs large expenses. On the ASP side, the software vendor enjoys recurring income and the ability to adapt the same software model to numerous customers. While differing slightly from the traditional ASP model, the present invention is particularly well suited to a per-transaction billing model.

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[0036] With regard to the current system, an ASP can provide a web site which allows users to build an application on line, possibly without incurring any expense. Once the customer is satisfied with the program, it can automatically be deployed to designated computer devices within the system. When a user provides input, the computer device can find a direct network connection to the ASP or, more likely, find an Internet connection and report the data to the ASP via the Internet connection. Once received at the ASP, the data can be processed and is available for viewing or use by the client virtually instantly via the Internet. Thus, data entered at any location may be viewed by the client in real time, worldwide.

[0037] Further objects, features, and advantages of the present invention will be apparent to those skilled in the art upon examining the accompanying drawings and upon reading the following description of the preferred embodiments.

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BRIEF DESCRIPTION OF THE DRAWINGS

[0038] FIG. 1 provides a diagram of the inventive system.

[0039] FIG. 2 provides a diagram of the inventive system as used for form creation.

[0040] FIG. 3 provides a diagram of the inventive system as used for information collection and review.

[0041] FIG. 4 depicts a sequence of tasks for collecting data through the use of prior art systems.

[0042] FIG. 5 depicts the tasks of FIG. 4 utilizing the inventive system.

[0043] FIG. 6 is a work flow diagram of an embodiment utilizing the inventive system.

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DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0044] Before explaining the present invention in detail, it is important to understand that the invention is not limited in its application to the details of the construction illustrated and the steps described herein. The invention is capable of other embodiments and of being practiced or carried out in a variety of ways. It is to be understood that the phraseology and terminology employed herein is for the purpose of description and not of limitation.

[0045] Referring now to the drawings, wherein like reference numerals indicate the same parts throughout the several views, a diagram of the inventive system is shown in FIG. 1. Typically, the system for data management **10** includes: at least one server **24** preferably having an Internet connection **26**; a plurality of handheld computers **28-32** operated remotely from server **24**, each handheld **28-32** including a network connection **34- 38**, respectively, for loosely networking handhelds **28-32** to server **24**; and a computer **22** connected to the Internet for providing administration of the system and for reviewing data collected by the system.

[0046] Server **24** is shown preferably connected to the Internet **26** and loosely networked to handheld computers **28-32** through connections **34-38**, respectively. As will be apparent to those skilled in the art, network connection **26** could instead be local area network or a private wide area network. Similarly, connections **34-38** may be any one of a number of optional connections which ultimately connect a remote device to server **24**. By way of example and not limitation, connection **34** could be a simple dial up connection

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through a conventional telephone line to connect handheld **28** directly to server **24**. At the same time, connection **36** could be an infrared (IR) connection between handheld **30** and a desktop computer (not shown) which in turn, is connected to server **24** via the Internet. Connection **38** could be a wireless modem, i.e., a CDPD interface, a CDMA interface, a GSM interface, an analog cellular modem, or the like, which either establishes a direct connection with server **24** or establishes an Internet connection to reach server **24** via the Internet. Other options would include a wireless LAN connection, a direct RS-232 connection, a docking station connected to a desktop computer, etc. It should be noted that, regardless of the type of connection, handhelds **28-32** are ultimately connectable to server **24** in a loosely networked fashion.

[0047] It should be noted that handheld computers **28-32** need not be the same type, or even compatible devices. As a part of the inventive system each remote device, preferably a handheld computer, is provided with an operating instruction system ("OIS") which overlays its native operating system. Once equipped with the OIS, a remote device can be programmed according to methods described hereinafter. Any program developed under the inventive system will run on any handheld computer equipped with the OIS and files on one such handheld will transfer freely to any other handheld or any computer connected to the inventive system.

[0048] As noted above, with regard to the present invention, the term "loosely networked" is used to describe a networked computer system wherein devices on the network are tolerant of intermittent network connections. In particular, if any communication

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connection is available between devices wishing to communicate, network transmissions occur normally, in real time. If a network connection is unavailable, the information is temporarily stored in the device and later transmitted when the connection is restored. Unless otherwise specified, hereinafter the terms "network" or "networked" refer to loosely networked devices.

[0049] It should also be noted that the inventive system is indifferent as to the particular type of communication channel used for connections **34-36** . Thus, by way of example and not limitation, while connection **36** might today be an IR link to a desktop computer which accesses server **24** via the Internet, tomorrow, handheld **30** might establish a connection **36** with server **24** via a CDPD interface. The particular link selected will be the first available link.

[0050] The inventive system may be thought of as taking on two distinct modes of operation. First, as shown in FIG. 2, the system provides an administrative function. From any computer **22** connected to the Internet **26**, a client can access server **24** to administer the inventive system. Administration involves tasks such as form creation, management, and validation; user setup, and management of system security.

[0051] In terms of the present invention, handheld computers are favored for their portability and their usefulness in gathering data from the field, whether the field is a stockroom for a manufacturing facility, a production floor, a delivery site for a product, etc. More generally, field locations are typically areas where people work without the convenience of a desktop.

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[0052] According to the preferred arrangement, data may be gathered by prompting the user via the handheld **28** with a series of questions or statements, each of which calls for a response. This series of questions or statements will have been constructed on computer **22** and reduced to tokenized form for transmission to the handheld **28**. For purposes of the instant disclosure, the series of questions/statements will collectively be referred to as a questionnaire. As will be discussed in greater detail below, the questionnaire is actually designed to include internal branching logic which is implemented by the OIS. Hence, with regard to the present invention, the terms "program" and "form" are used interchangeably with questionnaire.

[0053] An important aspect of the invention is the ease with which a client can create a form and distribute the form to the appropriate handheld devices in the field. Continuing with FIG. 2, typically a client uses a computer **22** having access to the Internet **26** to communicate with server **24**. As part of the administrative function provided by system **10**, computer **22** provides a web-based interface which allows a client to create a questionnaire. As a first step, preferably, the client selects a type of question from a list of standard question types. This list would include alternatives for the way the question is posed to the user, for example visual or vocal, and the type of answer to expect, whether yes/no, multiple choice, narrative, numerical, etc.

[0054] As the client creates a list of questions, symbols from a tool bar may be used to control conditional branching based on the user's response. As the client enters questions and selects response types, server **24** builds a stack of questions and responses, and assigns

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indices, or tokens, which point to each question or response. Each token preferably corresponds to a logical, mathematical, or branching operation and is preferably selected and made a part of the questionnaire through a graphical user interface. By this mechanism, a user is able to create a series of questions, the precise nature of which is dependent on the user's responses. For example, the questionnaire designer might desire to create a form that asks the user different questions; depending on whether the user was male or female. In order to do this, the designer would enter the questions ("Are you a man or woman?"); select a response (a "pop up" list of two entries male and female); select a token (branch if "male"); assign that token to this question; and, specify an "end" location for the "branch" (i.e., the first question asked of "males").

[0055] When the questionnaire **40** is complete, server **24** sends the stack of questions and defined responses to the appropriate handheld devices, as represented by handheld **28**, via the loosely networked connection **34**. In addition, server **24** sends the operating logic for that questionnaire, which is simply a list of tokens which point to the questions and responses to each question as well as tokens for program control or math operations. As will be apparent to those skilled in the art, if a question or response is repeated within the questionnaire, only a pointer need be repeated in the program list, not the entire question.

[0056] According to another preferred arrangement, there is provided a system, substantially as defined above, wherein the questionnaire which is transmitted to the handheld can be incrementally updated on each networked handheld **28**, rather than resending the entire questionnaire. For example, if a question is modified or replaced, the

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new question and a new list are the only information which need to be transmitted to the handheld device **28**. This incremental update capability dramatically reduces the quantity of computer instructions required to update a form. It should be noted that, if connection **34** is present, the program update will take place virtually at the same time the client finishes questionnaire **40** at computer **22**. If the network connection is unavailable, the update will happen automatically as soon as the connection **34** is restored.

[0057] Turning next to FIG. 3, in a preferred embodiment the user will initiate the execution of the questionnaire according to instructions previously provided to him or her. For example, the user might be instructed to initiate the questionnaire as soon as he or she pulls into the drive-in lane of a take-out eatery. This would be the case if the questionnaire were designed to collect information regarding service at that establishment. In such an event, the questionnaire might contain questions related to service time, cleanliness, friendliness of the employees, etc., all of which would potentially be of interest to the owner/client. The user will preferably respond to each question in turn, the questions being presented according to the logic defined by the client and built into the questionnaire. In some instances, the text of the question might instruct the user to perform acts and/or wait until a certain event happens before responding (e.g., "Pull up to the take-out window. How long was it before you received your order?") The user's responses to the items in the questionnaire are stored within the handheld **28** as they are collected. In some cases, the questionnaire logic might allow the user to skip questions and (optionally) return to them later. Additionally, the questionnaire designer might include a token that initiates a final

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review of the data collected from the user in this instance to make certain that all "required" questions, (which have preferably been so designated by marking them with the appropriate token) have been answered. Failure by the user to respond to a required question will result in the OIS prompting the user again for a response.

[0058] Several options are available for the transmission of responses from handheld **28** to server **24**. First, regardless of the availability of connection **34**, responses may be stored locally at handheld **28** until the form is fully completed and then sent as a batch to server **24**. This transfer may optionally occur automatically, or upon direction of the user as specified by the client during the creation of the form. If the link is not available at the time of completion of the form, transmission will be automatically delayed until connection **34** is restored.

[0059] Alternatively, selected responses, or all responses, may be configured to transmit immediately upon entry, assuming of course that connection **34** is available. This option is particularly important where the user of handheld **28** has entered information which might be indicative of a problem with a process or indicate an emergency. Again, if connection **34** is unavailable, immediate transmissions will also be delayed until a connection is available.

[0060] As data from a handheld is received at server **24** it is processed, as necessary, and placed in a database where it can be accessed via the Internet **26**. A client can then use a computer **22** with Internet access to review or use the data from virtually anywhere in the

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world.

[0061] Turning next to FIG. 4, wherein a prior art system built around paper forms is shown, in the past, a paper form had to be created, printed, and delivered to a user of the form. Armed with the form, the user had to complete the assigned task and complete the form reflecting observations made during the task. If the user delayed in filling out the form, these observations were subject to the inaccuracies associated with human memory. A completed form was then typically delivered to yet another person for data entry before the information was finally available to others in the company. As will be appreciated by those familiar with such operations, whether a result of unreadable forms or a result of human error at data entry, this step is responsible for a significant level of errors.

[0062] Turning next to FIG. 5, in contrast to prior systems , with the present system, a form may be entered on-line, the form is automatically sent to the handheld computer of the user, usually within seconds, the user enters data directly at the location of the user's assigned task, eliminating memory errors, and made available to others in the organization in virtually a real time fashion. Thus, not only is the data almost instantly available, at least two sources of error, the memory of the user and data entry, have been eliminated.

[0063] An example of where the inventive system is particularly useful is in the area of mystery shoppers. Many restaurant chains and retail chain stores employ mystery shoppers to patronize one of the chain's establishments and report on the experience. In the area of fast food, a mystery shopper might, for example, use the drive through window to purchase a breakfast sandwich and a cup of coffee.

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[0064] Prior to the trip to the restaurant, an employee of the client restaurant develops a questionnaire and enters it on the web site of the ASP that is providing the mystery shopper support service. In this case, the restaurant is interested in the waiting time of their patrons, the service provided to their patrons, and the quality of the food served. A questionnaire is designed to elicit such information from the shopper/user. The results of the mystery shopper's experience will be compared to quality standards established for the entire chain and used to rate the franchisee/owner of particular restaurants.

[0065] As the mystery shopper enters the parking lot, the shopper will be prompted to enter a store number or location. If the handheld computer is equipped with a GPS receiver, this information could be entered automatically. Of course the time and date from the computer's real time clock are preferably recorded in the form. As the shopper reaches the end of the drive through line, she starts a timer on the hand held computer, preferably by "tapping" on the face of the handheld in the appropriate region of the screen. When the speaker is reached, the first timer is stopped and a second timer is started.

[0066] If the shopper is asked to wait before ordering, a second timer is started and a third timer is started. Upon a request for her order, the mystery shopper stops the previous timers and yet a fourth timer is started. She orders her breakfast sandwich and coffee and pulls forward in line. While sitting in line, the handheld computer asks if the speaker could be clearly understood, if the menu was in good shape, and if the area around the menu appeared neat and clean.

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[0067] Upon reaching the window, the shopper presses a button which stops the fourth timer and starts a fifth timer. As her money is taken, the fifth timer is stopped and yet a sixth timer is started. She pays with a twenty dollar bill and, upon receiving her change, notes the accuracy of her change, whether the person at the window is pleasant, stops the sixth timer and starts a seventh timer.

[0068] Upon receiving her food the seventh timer is stopped and she pulls into a parking place to sample the food and measure the temperature of the coffee with a temperature probe attached to her handheld computer. After entering her impression of the sandwich, the computer asks a few questions about the number of cars in the parking lot and the general appearance of the store.

[0069] As the shopper enters the last response, the CDPD modem attached to her handheld contacts the ASP and delivers the collected data which is forwarded to a database where it is accessible by the staff of the restaurant chain, only seconds after the shopper has taken her first bite of the sandwich.

[0070] Note that the user's interaction with the handheld in the previous example was all defined by logic that the client has incorporated into the questionnaire when it was designed. The text of the directions to the user (e.g., "Pull up to the drive-in window.") has been designed into the questionnaire. Additionally, preferably there will be tokens that represent "timers" which are designed to make it easy for the user to enter elapsed time information in response to a question (e.g., the user might be asked to tap the screen a first time to start the timer running and a second time to stop it, with the elapsed time being

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automatically calculated and stored as a response to a client question). Clearly, a goal of the instant system is to provide a client with the tools necessary to quickly and easily construct a complex questionnaire which presents the user with questions which are adaptively selected according to the wishes of the designer.

[0071] A second example of where the inventive system is particularly useful is the area of transfer by a medical service provider of a patient's medical information to an insurance company following treatment. In this example, data is exchanged between computers (handhelds, desktops, laptops, etc.) at different locations in a secure manner without providing an outside party access to the secure internal computer network of the medical service provider (MSP). The medical service provider is preferably a hospital, however, it is understood that this term could include clinics, minor emergency centers, physician's offices or any such provider of medical care/treatment.

[0072] Modern medical service providers are continually striving to develop methods of transferring medical records and data to insurance companies for rapid claims processing which requires the minimum of manual forms generation, handling, processing, and data entry. Moreover, pressure, both publicly and legislatively, is being applied to the healthcare industry as a whole to protect the privacy of this data including confidential patient information. As a result, transmission of medical information in secure, generally encrypted formats is required. However, such methods of data transfer require a high level of coordination between the medical service providers and the insurance companies, both of which are reluctant to allow the other, and especially third parties, access to their databases

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and network hardware necessary to achieve these levels of coordination.

[0073] The present system can be employed to manage the data flow in a manner that provides secure data transfer between parties without the necessity of either party allowing outside access to its respective data storage systems. In this embodiment, the medical service provider can use the system to design or update the medical forms as described above or contract with the ASP to develop and update such forms.

[0074] Referring to FIG. 6, a system diagram is shown depicting medical services provider **120** (MSP), ASP **130** and insurance companies **140, 142,** and **144**. As stated, the medical forms can be designed and/or updated seamlessly by the MSP or ASP as shown in **122**. The computers of MSP would be equipped with the inventive OIS thereon to allow forms design, branching logic, and cryptic data transfer at **122**. Once the medical form is designed, medical information can be entered onto the form(s) in the system following treatment by the MSP. Once entered, the data is converted to tokenized form by the OIS for encrypted transfer to the ASP **130** according to step **124**. In this way, a patient's medical data is continuously, seamlessly and securely transferred between MSP **120** and ASP **130**.

[0075] Once the ASP **130** receives the tokenized data from MSP **120** pursuant to transfer **124**, the data is stored in a standard database or a database customized for each insurance company within ASP **130**. In a preferred arrangement, the ASP will then alert one or more of the relevant insurance providers **140, 142** , and/or **144** that data is present and available for immediate retrieval from the database of ASP **130**. In the alternative, the

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system could be embodied such that insurance providers **140**, **142**, and **144** would periodically query ASP **130** on a set time interval regarding the presence of information.

[0076] At the time insurance providers **140**, **142**, and/or **144** are aware that data is present and available from ASP **130**, the insurance provider can access the ASP via a global computer network such as the Internet for retrieval of such information. Typically, access to information maintained by ASP **130** is restricted by password or other similar security measures. Insurance provider **140**, **142**, and/or **144** can then download data from ASP **130** which is either encrypted in a standard format or in a format which is customized for the insurance provider (and may also be encrypted). The download step is depicted by arrows **132**, **134**, and **136**, respectively.

[0077] In this embodiment, the customer of ASP **130**, typically MSP **120**, would be billed for the transaction or by the volume of data transmitted.

[0078] Accordingly, a secure method of transfer of medical information between MSP **130** and insurance providers **140**, **142**, and/or **144** is defined using the method and apparatus of the present invention.

[0079] By way of example and not limitations, various preferred embodiments of the instant invention will include a number of desirable features or traits such as: 128-bit CerticomT end-to-end wireless security; ability of the administrator to clean erroneous data; all data and administrative transactions on one or more secure servers; form question responses are time stamped; centralized online repository of all form responses; the complete form is available for review or update on the Web; context-sensitive help; from the

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customer's perspective, the system is scalable and flexible; users, questionnaires, and responses manageable as groups; data exportation to CSV, XLS, XML, as well as any other format or external application; ability to define multiple form administrators; forms deployable wirelessly over the Internet; error checking for dropped connection in a loosely networked environment; a provider of the service can offer secondary services such as form design consulting services; partially completed forms can be saved and restarted; OIS allows data to be gathered in virtually any form factor, i.e. web, handheld, phone, laptop, and the like; the client can inspect individual responses from a form; multiple forms can be made available on same device; online data report generation and publishing from gathered responses; optional authentication of users; responses can be subjected to bounding and validation logic; real-time accessibility to form responses from an Internet connected desktop; responses retrievable or accessible anywhere in the world via a provider's web site; robust question branching logic; unlimited administrative control of the user, e.g. a user can be prevented from completing a form more than once; administrative hierarchy allowing some administrators to view other administrators' data, if allowed; web based service eliminates the need for client installation; archival of old forms and responses; user interfaces brandable with corporate identity; ability to clone, or modify, existing forms into a new form; ability to create summary reports with informative charts; customizable reports can be designed to meet clients' specific needs; definable start and stop dates for forms allow control of a time frame over which data can be gathered; ability to include pictures in questions; responses from various forms can be merged into a common report; phone call

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completion of forms; administrators can be provided with predefined question and form libraries; responses can be reviewed prior to submitting; print form responses from the remote computer; administrative control of questionnaire aesthetics; software developers kit can be provided by the service provider; language controls available during question development, i.e. spell check, thesaurus, translation of multi-language forms, extended character sets, etc.; various events can be triggered from within a form; and reports can be viewed on the remote computer.

* * * * * *

[0080] Thus, the present invention is well adapted to carry out the objects and attain the ends and advantages mentioned above as well as those inherent therein. While presently preferred embodiments have been described for purposes of this disclosure, numerous changes and modifications will be apparent to those skilled in the art. Such changes and modifications are encompassed within the spirit of this invention.

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CLAIMS

What is claimed is:

1. A method for managing data including the steps of:

   (a) creating a questionnaire comprising a series of questions;

   (b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire;

   (c) transmitting said plurality of tokens to a remote computing device;

   (d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user;

   (e) transmitting at least a portion of said response from the user to a server via a network; and

   (f) storing said response at said server.

2. The method for managing data of claim 1 further comprising the step of:

   (g) translating said response to a format recognizable by a particular computer program; and

   (h) accessing the translated response from a computer executing said particular computer program.

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3. The method for managing data of claim 1 wherein step (a) includes the substeps of:

(a) creating a questionnaire by:

(i) entering a series of questions into a questionnaire design computer program;

(ii) identifying within said questionnaire design computer program the type of response allowed for each question of said series of questions; and

(iii) identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions.

4. The method for managing data of claim 1 wherein step (b) includes the substeps of:

(b) tokenizing said questionnaire thereby producing a plurality of tokens representing said questionnaire by:

(i) assigning at least one token to each question of said series of questions;

(ii) assigning at least one token to each response called for in said series of questions to identify the type of response required; and

(iii) assigning at least one token to each branch in said questionnaire to identify the required program control associated with said branch.

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5. The method of data management of claim 1 wherein the transmission of said tokens in step (c) occurs via the network of step (e).

6. A method for modifying a questionnaire used in data management according to the method of claim 1 including the steps of:

(a) making at least one incremental change to a portion of the questionnaire;

(b) tokenizing said at least one incremental change to said questionnaire;

(c) transmitting at least a portion of said tokens resulting from step (b) to a remote computing device, said transmitted tokens comprising less than the entire tokenized questionnaire;

(d) incorporating said transmitted tokens into said questionnaire at said remote computing device.

7. A method for collecting survey data from a user comprising:

(a) designing a questionnaire having branching logic on a first computer platform;

(b) automatically transferring said designed questionnaire to at least one loosely networked computer;

(c) executing said transferred questionnaire on said loosely networked computer, thereby collecting responses from the user;

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(d) automatically transferring via the loose network any responses so collected to a central computer; and,

(e) making available on the Web any responses transferred to said central computer in step (d).

8. The method for collecting survey data according to claim 7 further comprising:

(a) assessing a charge for each transferred response received by said central computer.

9. A method for managing data transfers between computers including the steps of:

(a) creating a questionnaire at a first site in a first computer located at a second site, said first site and said second site being connected by a network;

(b) transmitting said question to a remote computer via said network, said remote computer running an OIS;

(c) modifying said questionnaire with incremental changes at a third site in said first computer located at said second site; and

(d) modifying said questionnaire in said remote computer with said incremental changes.

10. The method for managing data transfers between computers according to claim 9 wherein said first site and said third site are the same.

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11. The method for managing data transfers between computers according to claim 9 wherein said third site is at said remote computer.

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ABSTRACT OF THE DISCLOSURE

A method for the management of data collected from a remote computing device including the steps of: creating a questionnaire; transmitting the questionnaire to a remote computer; executing the questionnaire in the remote computer to prompt a user for responses to questions of the questionnaire; transmitting the responses to a sever via a network; making the responses available on the Web. Preferably, computers used in connection with the inventive method are loosely networked in that network connections between computers are not always available and, when a connection is not available, data is stored at a node of the network and transmitted at the earliest time when a connection is available. In one preferred embodiment, the inventive method is used to collect survey data and to make the responses to the survey available to a client in virtually real time over the Internet.

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Fig. 1

Fig. 2

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Fig. 3

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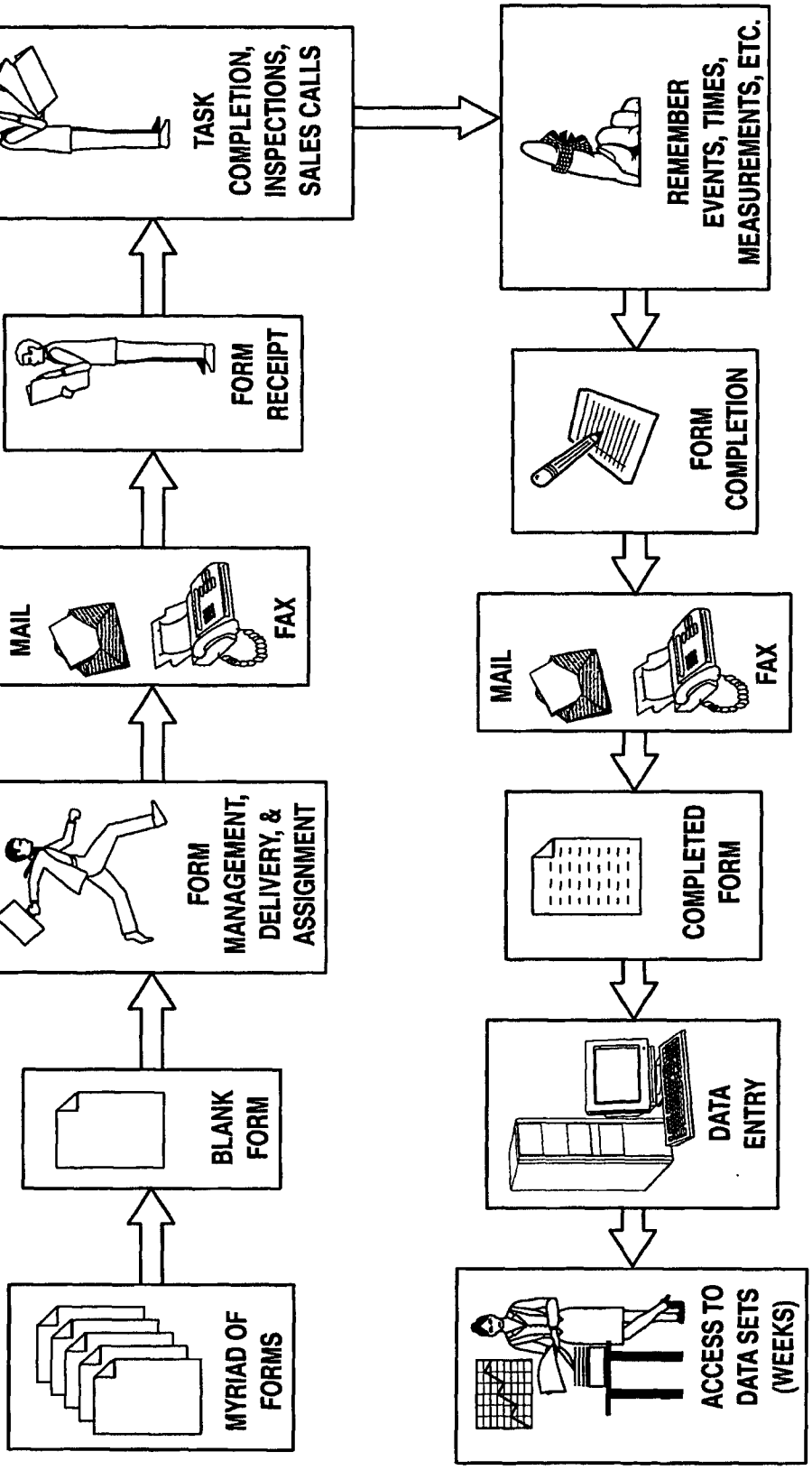

Fig. 4
(PRIOR ART)

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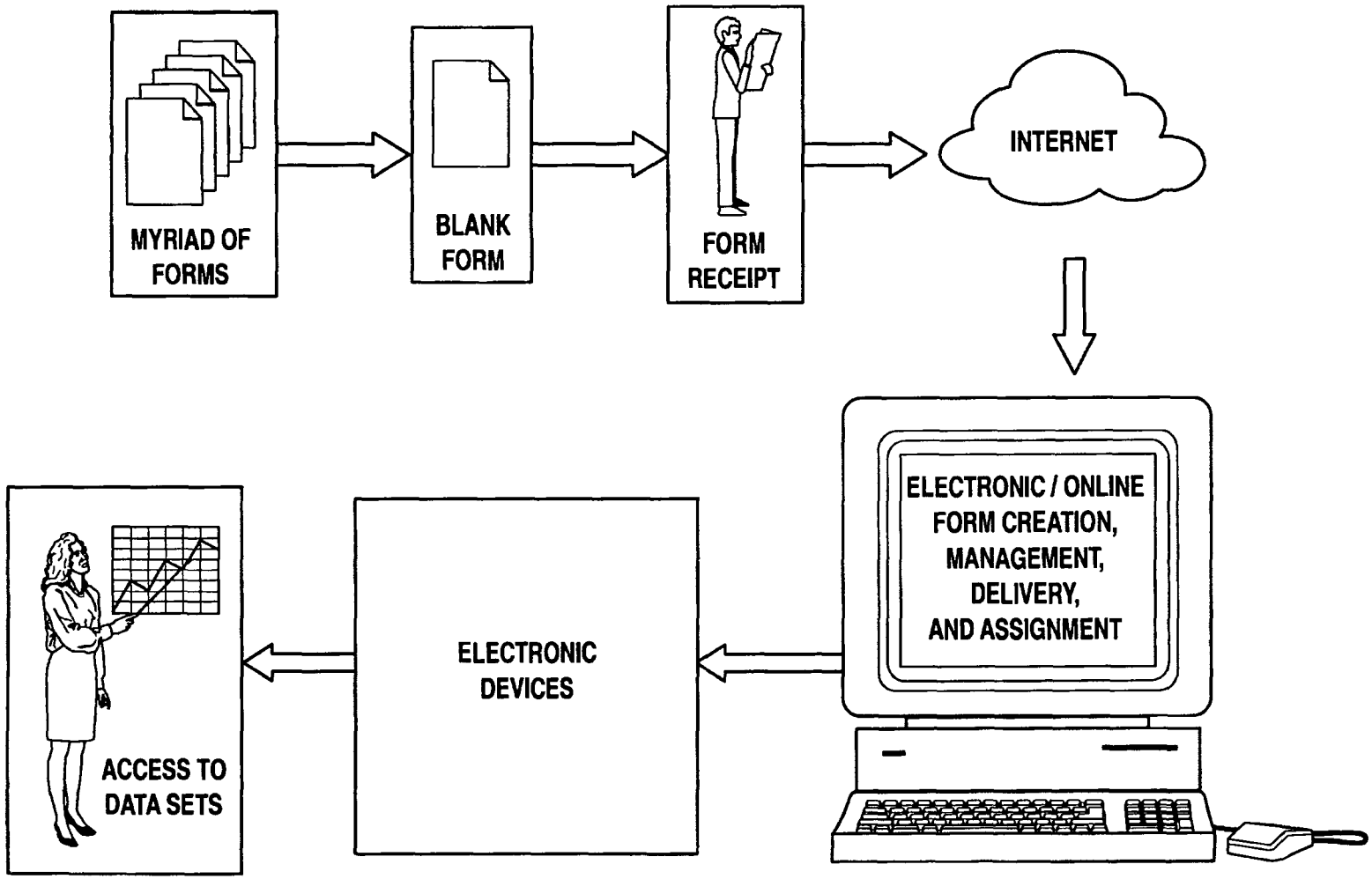
Fig. 5



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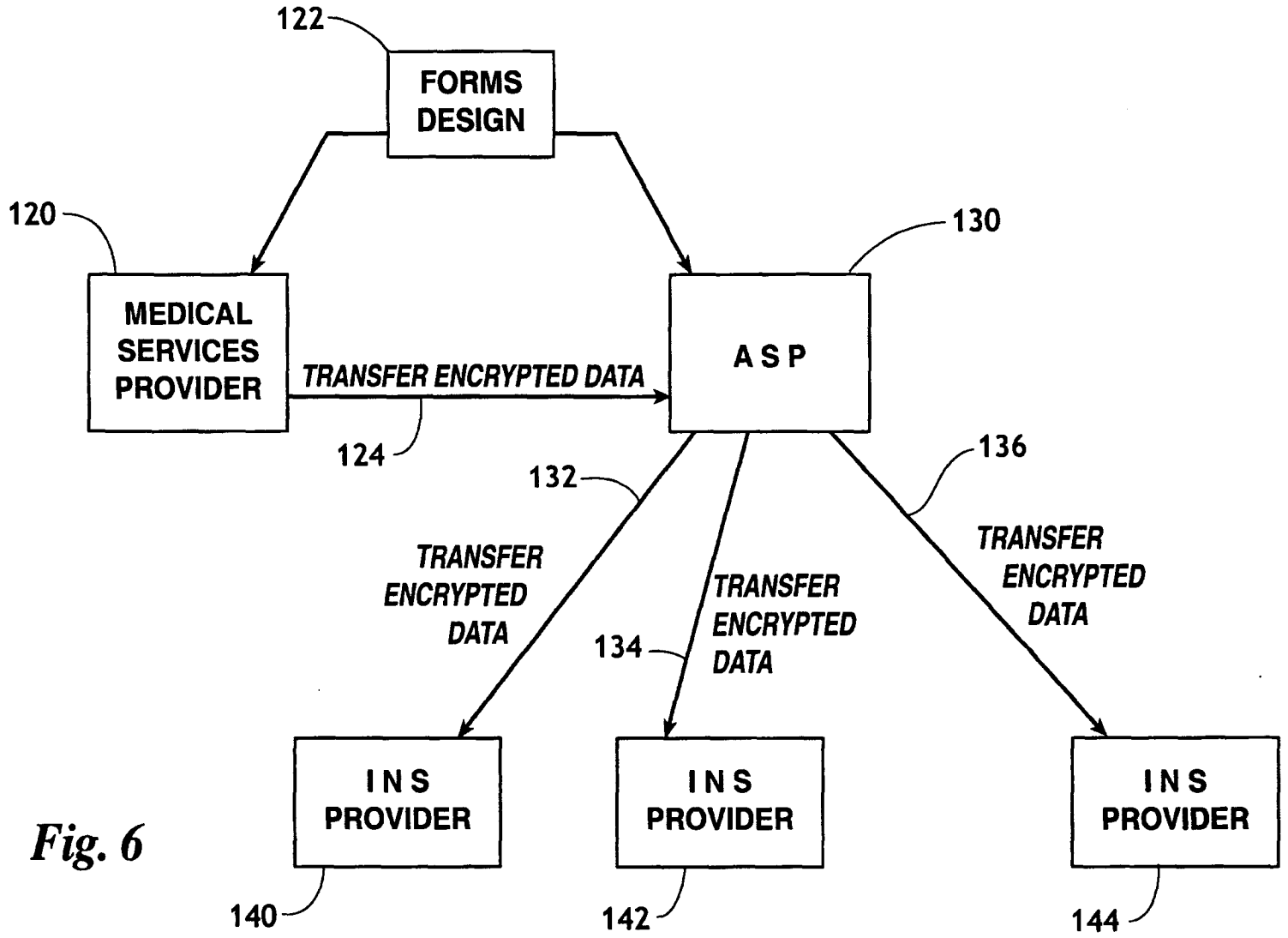

Fig. 6

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COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL, CONTINUATION, OR C-I-P)

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

This declaration is for an original application.

INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am the original, first and sole inventor of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

SYSTEM AND METHOD FOR DATA MANAGEMENT

SPECIFICATION IDENTIFICATION

The specification is attached hereto.

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in 37, Code of Federal Regulations, § 1.56, and which is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent.

CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)
(35 U.S.C. § 119(e))

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

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PROVISIONAL APPLICATION NUMBER	FILING DATE
60/404,491	08/19/2002

POWER OF ATTORNEY

I hereby appoint the following practitioner(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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DECLARATION

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

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218518.1

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Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Filer:	Scott R. Zingerman/Jamie Robinson
Attorney Docket Number:	57442/10-351

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	82	82
Utility Search Fee	2111	1	270	270
Utility Examination Fee	2311	1	110	110
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

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Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**462**

Electronic Acknowledgement Receipt

EFS ID:	8688161
Application Number:	12910706
International Application Number:	
Confirmation Number:	8703
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Customer Number:	22206
Filer:	Scott R. Zingerman/Jamie Robinson
Filer Authorized By:	Scott R. Zingerman
Attorney Docket Number:	57442/10-351
Receipt Date:	22-OCT-2010
Filing Date:	
Time Stamp:	19:28:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$462
RAM confirmation Number	5421
Deposit Account	060540
Authorized User	ROBINSON,JAMIE A.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ADS.pdf	1168045 6c3675f4b71f2aa1f79525ee370feea83467a2d0	no	4
Warnings:					
Information:					
2		SCANNED_Spec_Cl_Abs.pdf	575631 dd8e432a68b5844f5cab2cdbd04290b6f25c2706	yes	35

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	29
	Claims	30	34
	Abstract	35	35

Warnings:					
Information:					
3	Drawings-only black and white line drawings	SCANNED_Figs.pdf	72367 631306dc2315e6997fb1595412c6469a7f914645	no	6
Warnings:					
Information:					
4	Oath or Declaration filed	SCANNED_Decl_POA.pdf	61275 e5bec092d9ea2a21607e4db70821206d0c217bc8	no	2
Warnings:					
Information:					
5	Fee Worksheet (PTO-875)	fee-info.pdf	32998 538a1b24f0fe14d5e1a03cd851b6115983fa13ce	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1910316		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Electronic Acknowledgement Receipt

EFS ID:	8688161
Application Number:	12910706
International Application Number:	
Confirmation Number:	8703
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Customer Number:	22206
Filer:	Scott R. Zingerman/Jamie Robinson
Filer Authorized By:	Scott R. Zingerman
Attorney Docket Number:	57442/10-351
Receipt Date:	22-OCT-2010
Filing Date:	
Time Stamp:	19:28:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$462
RAM confirmation Number	5421
Deposit Account	060540
Authorized User	ROBINSON,JAMIE A.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ADS.pdf	1168045 6c3675f4b71f2aa1f79525ee370feea83467a2d0	no	4
Warnings:					
Information:					
2		SCANNED_Spec_Cl_Abs.pdf	575631 dd8e432a68b5844f5cab2cdbd04290b6f25c2706	yes	35

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	29
	Claims	30	34
	Abstract	35	35

Warnings:					
Information:					
3	Drawings-only black and white line drawings	SCANNED_Figs.pdf	72367 631306dc2315e6997fb1595412c6469a7f914645	no	6
Warnings:					
Information:					
4	Oath or Declaration filed	SCANNED_Decl_POA.pdf	61275 e5bec092d9ea2a21607e4db70821206d0c217bc8	no	2
Warnings:					
Information:					
5	Fee Worksheet (PTO-875)	fee-info.pdf	32998 538a1b24f0fe14d5e1a03cd851b6115983fa13ce	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1910316		

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

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New International Application Filed with the USPTO as a Receiving Office

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

PTO/SB/06 (12-04)

Date: **10/22/10**

Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/910,706

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	**82**		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	**270**		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	**110**		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	**11** minus 20 =		x$26		OR	x$52	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	**3** minus 3 =	*	x$110			x$220	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $260 ($130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			195			390	
			TOTAL	**462**		TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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

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

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Page 56 of 2584

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www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/910,706	10/22/2010		462	57442/10-351	11	3

CONFIRMATION NO. 8703

FILING RECEIPT

22206
FELLERS SNIDER BLANKENSHIP
BAILEY & TIPPENS
THE KENNEDY BUILDING
321 SOUTH BOSTON SUITE 800
TULSA, OK 74103-3318

Date Mailed: 11/05/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

J. David Payne, Broken Arrow, OK;

Assignment For Published Patent Application

MACROSOLVE, INC., Tulsa, OK

Power of Attorney:

Billy McCarthy--26772
Scott Zingerman--35422
Paul Johnson--35559
Richard Weeks--36050
Randall McCarthy--39297
James Lea III--41143
Terry Watt--42214
Fred Holmes--43677
Daniel Dooley--46369

Domestic Priority data as claimed by applicant

This application is a CON of 10/643,516 08/19/2003 PAT 7,822,816
which claims benefit of 60/404,491 08/19/2002

Foreign Applications

If Required, Foreign Filing License Granted: 11/03/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/910,706**

Projected Publication Date: 02/17/2011

Non-Publication Request: No

Early Publication Request: No

** **SMALL ENTITY** **

Unified Patents
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Title

SYSTEM AND METHOD FOR DATA MANAGEMENT

Preliminary Class

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

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

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Exhibit 1002
Page 58 of 2584

license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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

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

NOT GRANTED

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

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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/910,706	10/22/2010	J. David Payne	57442/10-351

CONFIRMATION NO. 8703

PUBLICATION NOTICE

22206
FELLERS SNIDER BLANKENSHIP
BAILEY & TIPPENS
THE KENNEDY BUILDING
321 SOUTH BOSTON SUITE 800
TULSA, OK 74103-3318

OC000000046066633

Title:SYSTEM AND METHOD FOR DATA MANAGEMENT

Publication No.US-2011-0040831-A1
Publication Date:02/17/2011

NOTICE OF PUBLICATION OF APPLICATION

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

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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Page 60 of 2584

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Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/910,706	10/22/2010	J. David Payne	71855/10-351	8703

22206 7590 03/16/2011

FELLERS SNIDER BLANKENSHIP
BAILEY & TIPPENS
THE KENNEDY BUILDING
321 SOUTH BOSTON SUITE 800
TULSA, OK 74103-3318

EXAMINER	
TRAN, NGHI V	

ART UNIT	PAPER NUMBER
2451	

MAIL DATE	DELIVERY MODE
03/16/2011	PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	12/910,706	PAYNE, J. DAVID	
	Examiner	Art Unit	
	NGHI V. TRAN	2451	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☒ Responsive to communication(s) filed on *10/22/2010*.

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

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

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

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

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

Application Papers

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

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

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

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

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Unified Patents
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DETAILED ACTION

1. Claims 1-11 are presented for examination.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-11 of the instance application are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 7,822,816. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitation of claims 1-11 of the instance application is overlapping with the limitation of claims 1-14 of U.S. Patent No. 7,822,816 as following:

U.S. Patent No. 7,266,600	**Instant Application No. 11/738,732**
1. A method for managing data including the steps of:	1. A method for managing data including the steps of:
a) creating a questionnaire comprising a series of questions;	(a) creating a questionnaire comprising a series of questions;
(b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire;	(b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire;
(c) <u>establishing a first wireless modem</u>	

or wireless LAN network connection with a remote computing device;	
(d) transmitting said plurality of tokens to a remote computing device via said first wireless modem or wireless LAN network connection;	(c) transmitting said plurality of tokens to a remote computing device;
e) terminating said first wireless modem or wireless LAN network connection with said remote computing device;	
(f) after said first wireless modem or wireless LAN network connection is terminated, executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user;	(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user;
(g) establishing a second wireless modem or wireless LAN network connection between said remote computing device and a server;	
(h) after said second wireless modem or wireless LAN network connection is established, transmitting at least a portion	(e) transmitting at least a portion of said response from the user to a server via a network; and

of said response from the user to said server via said second wireless modem or wireless LAN network connection; and	
(i) storing said transmitted response at said server.	(f) storing said response at said server.

4. Therefore, the limitation of claims 1-11 of the instance application is anticipated by the limitations of claims 1-14 of U.S. Patent No 7,822,816, and as such is unpatentable for obvious-type double patenting.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Lew et al., United States Patent Publication Number 2004/0210472 (hereinafter Lew).

7. With respect to claim 1, Lew teaches a method for managing data [see abstract] including the steps of:

(a) creating a questionnaire [= survey] comprising a series of questions [paragraphs 0005-0009];

(b) tokenizing said questionnaire [= encrypted survey information, paragraph 0013]; thereby producing a plurality of tokens representing said questionnaire [paragraphs 0005-0009];

(c) transmitting said plurality of tokens to a remote computing device [= the survey transmitter may transmit to the remote responding device in either a wired or a wireless manner, paragraph 0053];

(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response [= feedback] from a user [= feed back from a user, paragraph 0036];

(e) transmitting at least a portion of said response from the user to a server [= a central facility] via a network [paragraph 0050]; and

(f) storing said response at said server [= all feedback is transmitted to the central facility, S6100 of fig.2 and paragraph 0048].

8. With respect to claim 5, Lew further teaches wherein the transmission of said tokens in step (c) occurs via the network of step (e) [fig.3].

9. Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Sendowski et al., United States Patent Publication Number 2003/0198934 (hereinafter Sendowski).

10. With respect to claim 7, Sendowski teaches a method for collecting survey data from a user [see abstract] comprising:

(a) designing a questionnaire [= survey] having branching logic [= branch script object 124] on a first computer platform [= web server 121] [paragraphs 0023-0028 and 0041-0048];

(b) automatically transferring said designed questionnaire to at least one loosely networked computer [= automatically generate an HTML question page or question form, paragraph 0024-0031];

(c) executing said transferred questionnaire on said loosely networked computer, thereby collecting responses from the user [see abstract];

(d) automatically transferring via the loose network any responses so collected to a central computer [= medical survey provider 120] [paragraph 0020 and table 3]; and,

(e) making available on the Web any responses transferred to said central computer in step (d) [fig.1].

Claim Rejections - 35 USC § 103

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

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

12. Claims 2-4, 6, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lew as applied in claim 1 above, in view of Sendowski et al., U.S. Patent Application Publication No. 2003/0198934 (hereinafter Sendowski).

13. With respect to claim 2, Lew does not explicitly show the step of: (g) translating said response to a format recognizable by a particular computer program; and (h) accessing the translated response from a computer executing said particular computer program.

In a method of managing data, Sendowski discloses the step of: (g) translating said response to a format recognizable [= XML data structural] by a particular computer program [= branching script engine, paragraphs 0007-0008]; and (h) accessing the translated response from a computer executing said particular computer program [paragraphs 0034-0053 and fig.2].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lew in view of Sendowski by accessing a translated response to a format recognizable because this feature provides a framework of reusable software object implementing the creation and execution of any question-answer branching scripts [Sendowski, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to support thousands of concurrent users when it is required [Sendowski, paragraph 0005].

14. With respect to claim 3, Lew does not explicitly show wherein step (a) includes the sub-steps of:(a) creating a questionnaire by: (i) entering a series of questions into a questionnaire design computer program; (ii) identifying within said questionnaire design computer program the type of response allowed for each question of said series of questions; and (iii) identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions.

In a method of managing data, Sendowski discloses wherein step (a) includes the sub-steps of:(a) creating a questionnaire by: (i) entering a series of questions into a questionnaire design computer program [paragraphs 0034-0054]; (ii) identifying within said questionnaire design computer program the type of response allowed for each question of said series of questions [= answer types, paragraph 0019 and table 2]; and (iii) identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions [paragraph 0018 and table 1].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lew in view of Sendowski by identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions because this feature provides a framework of reusable software object implementing the creation and execution of any question-answer branching scripts [Sendowski, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have

been motivated in order to support thousands of concurrent users when it is required [Sendowski, paragraph 0005].

15. With respect to claim 4, Lew does not explicitly show wherein step (b) includes the sub-steps of: (b) tokenizing said questionnaire thereby producing a plurality of tokens representing said questionnaire by: (i) assigning at least one token to each question of said series of questions; (ii) assigning at least one token to each response called for in said series of questions to identify the type of response required; and (iii) assigning at least one token to each branch in said questionnaire to identify the required program control associated with said branch.

In a method of managing data, Sendowski discloses wherein step (b) includes the sub-steps of: (b) tokenizing said questionnaire thereby producing a plurality of tokens representing said questionnaire by: (i) assigning at least one token to each question of said series of questions [= a question uses tokens, paragraph 0019]; (ii) assigning at least one token to each response called for in said series of questions to identify the type of response required [= allows the answer to be collected into a name toke, paragraph 0020]; and (iii) assigning at least one token to each branch in said questionnaire to identify the required program control associated with said branch [paragraphs 0041-0049].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lew in view of Sendowski by assigning at least one token to each question of said series of questions, to each response called for

in said series of questions, and to each branch in said questionnaire because this feature provides a framework of reusable software object implementing the creation and execution of any question-answer branching scripts [Sendowski, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to support thousands of concurrent users when it is required [Sendowski, paragraph 0005].

16. With respect to claims 6 and 9, Lew teaches a method for managing data transfers between computers [see abstract and fig.1] including the steps of:

(a) creating a questionnaire [= survey] at a first site [= modulator 10] in a first computer [= media conveyor 20] located at a second site [paragraphs 0026-0029], said first site and said second site being connected by a network [fig.1];

(b) transmitting said question to a remote computer [= remote responding device] via said network, said remote computer running an OIS [paragraph 0053];

However, Lew does not explicitly show step (c) modifying said questionnaire with incremental changes at a third site in said first computer located at said second site; and step (d) modifying said questionnaire in said remote computer with said incremental changes.

In a method of managing data, Sendowski discloses step (c) modifying said questionnaire with incremental changes at a third site in said first computer located at said second site [= TSLastModified of table 2 and paragraph 0058]; and step (d)

modifying said questionnaire in said remote computer with said incremental changes [= TSLastModified of table 2 and paragraph 0058].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lew in view of Sendowski by modifying said questionnaire with incremental changes at a third site in said first computer located at said second site and modifying said questionnaire in said remote computer with said incremental changes because this feature provides a framework of reusable software object implementing the creation and execution of any question-answer branching scripts [Sendowski, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to support thousands of concurrent users when it is required [Sendowski, paragraph 0005].

17. With respect to claim 10, Lew further teaches wherein said first site and said third site are the same [fig.1].

18. With respect to claim 11, Lew further teaches wherein said third site is at said remote computer [fig.1].

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sendowski, as applied in claim 7 above, in view of Joao, U.S. Patent Application Publication No. 2001/0056374 (hereinafter Joao).

20. With respect to claim 8, Sendowski does not explicitly show assessing a charge for each transferred response received by said central computer.

In a method for collecting survey data, Joao discloses assessing a charge [i.e. compensation, rewards, rebates and/or incentives can be provided for viewing, reviewing, participating in and/or interacting with, the entire survey, poll and/or questionnaire, paragraph 0230] for each transferred response received by said central computer [paragraphs 0228-0037].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sendowski in view of Joao by assessing a charge for each transferred response received by said central computer because this feature can receive compensation, a reward, a rebate, and/or an incentive [Joao, paragraph 0009]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to facilitate commerce between any parties and/or any number of parties [Joao, paragraph 0009].

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi V. Tran whose telephone number is (571) 272-4067. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Follansbee/

Supervisory Patent Examiner, Art Unit 2451

Notice of References Cited	Application/Control No. 12/910,706	Applicant(s)/Patent Under Reexamination PAYNE, J. DAVID	
	Examiner NGHI V. TRAN	Art Unit 2451	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2004/0210472	10-2004	Lew et al.	705/010
*	B	US-2003/0198934	10-2003	Sendowski et al.	434/350
*	C	US-2001/0056374	12-2001	Joao, Raymond Anthony	705/14
*	D	US-2004/0117244	06-2004	Scott, Anthony	705/012
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12910706	PAYNE, J. DAVID
	Examiner	**Art Unit**
	NGHI V TRAN	2451

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

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

CLAIM		DATE								
Final	Original	03/09/2011								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12910706	PAYNE, J. DAVID
	Examiner	Art Unit
	NGHI V TRAN	2451

SEARCHED			
Class	Subclass	Date	Examiner
709	203	03/09/2011	NT
709	223	03/09/2011	NT
709	224	03/09/2011	NT

SEARCH NOTES		
Search Notes	Date	Examiner
Keyword search using EAST	03/09/2011	NT

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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BIB DATA SHEET

CONFIRMATION NO. 8703

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/910,706	10/22/2010 RULE	709	2451	71855/10-351

APPLICANTS
J. David Payne, Broken Arrow, OK;

**** CONTINUING DATA ***************************
This application is a CON of 10/643,516 08/19/2003 PAT 7,822,816
which claims benefit of 60/404,491 08/19/2002

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
11/03/2010

Foreign Priority claimed	35 USC 119(a-d) conditions met	Verified and Acknowledged	Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ Yes ☑ No	☐ Yes ☑ No	/NGHI V TRAN/ (Examiner's Signature)	☐ (Initials)	OK	6	11	3

ADDRESS

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UNITED STATES

TITLE

SYSTEM AND METHOD FOR DATA MANAGEMENT

FILING FEE RECEIVED		
462	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Payne Application No.: 12/910,706 Filed: 10/22/2010 Title: SYSTEM AND METHOD FOR DATA MANAGEMENT Attorney Docket No.: 71855/10-351	Confirmation No.: 8703 Art Unit: 2451 Examiner: Nghi V. Tran

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

AMENDMENT AND RESPONSE

This paper is filed in response to the Office Action mailed 03/16/2011. Please consider the instant filing to be a Petition for a Three Month Extension of Time to Respond. A **USPTO credit card payment form PTO 2038 is attached to this filing or charge to a credit card will be authorized through EFS Web filing**.

Please amend the application as follows:

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In the claims:

This listing of claims will replace all prior versions and listings of the claims in this application.

Please enter new Claims **12 – 31**.

1. (*Previously Presented*) A method for managing data including the steps of:

(a) creating a questionnaire comprising a series of questions;

(b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire;

(c) transmitting said plurality of tokens to a remote computing device;

(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user;

(e) transmitting at least a portion of said response from the user to a server via a network; and

(f) storing said response at said server.

2. (*Previously Presented*) The method for managing data of claim 1 further comprising the step of:

(g) translating said response to a format recognizable by a particular computer program; and

(h) accessing the translated response from a computer executing said particular computer program.

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3. (*Previously Presented*) The method for managing data of claim 1 wherein step (a) includes the substeps of:

(a) creating a questionnaire by:

(i) entering a series of questions into a questionnaire design computer program;

(ii) identifying within said questionnaire design computer program the type of response allowed for each question of said series of questions; and

(iii) identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions.

4. (*Previously Presented*) The method for managing data of claim 1 wherein step (b) includes the substeps of:

(b) tokenizing said questionnaire thereby producing a plurality of tokens representing said questionnaire by:

(i) assigning at least one token to each question of said series of questions;

(ii) assigning at least one token to each response called for in said series of questions to identify the type of response required; and

(iii) assigning at least one token to each branch in said questionnaire to identify the required program control associated with said branch.

5. (*Previously Presented*) The method of data management of claim 1 wherein the transmission of said tokens in step (c) occurs via the network of step (e).

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6. (*Previously Presented*) A method for modifying a questionnaire used in data management according to the method of claim 1 including the steps of:

(a) making at least one incremental change to a portion of the questionnaire;

(b) tokenizing said at least one incremental change to said questionnaire;

(c) transmitting at least a portion of said tokens resulting from step (b) to a remote computing device, said transmitted tokens comprising less than the entire tokenized questionnaire;

(d) incorporating said transmitted tokens into said questionnaire at said remote computing device.

7. (*Previously Presented*) A method for collecting survey data from a user comprising:

(a) designing a questionnaire having branching logic on a first computer platform;

(b) automatically transferring said designed questionnaire to at least one loosely networked computer;

(c) executing said transferred questionnaire on said loosely networked computer, thereby collecting responses from the user;

(d) automatically transferring via the loose network any responses so collected to a central computer; and,

(e) making available on the Web any responses transferred to said central computer in step (d).

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8. (*Previously Presented*) The method for collecting survey data according to claim 7 further comprising:

(f) assessing a charge for each transferred response received by said central computer.

9. (*Currently Amended*) A method for managing data transfers between computers including the steps of:

(a) creating a questionnaire at a first site in a first computer located at a second site, said first site and said second site being connected by a network;

(b) transmitting said questionnaire to a remote computer via said network, said remote computer running an OIS;

(c) modifying said questionnaire with incremental changes at a third site in said first computer located at said second site; ~~and~~

(d) transmitting said incremental changes from said first computer to said remote computer via said network; and,

(e)~~(d)~~ modifying said questionnaire in said remote computer with said incremental changes.

10. (*Previously Presented*) The method for managing data transfers between computers according to claim 9 wherein said first site and said third site are the same.

11. (*Previously Presented*) The method for managing data transfers between computers according to claim 9 wherein said third site is at said remote computer.

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12. (*New*) A method for managing data comprising the steps of:

(a) establishing communications between a handheld computing device and an originating computer;

(b) receiving within said handheld computing device a transmission of a tokenized questionnaire from said originating computer, said tokenized questionnaire comprising a plurality of tokens;

(c) ending said communications between said handheld computing device and said originating computer;

(d) after said communications has been ended,

(d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a user, and,

(d2) storing within said computing device said at least one response from the user;

(e) establishing communications between said handheld computing device and a recipient computer; and,

(f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer.

13. The method for managing data according to Claim 12, wherein step (b) comprises the steps of:

(b1) creating a questionnaire,

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(b2) tokenizing said questionnaire, thereby producing a plurality of tokens representing said questionnaire,

(b3) storing said plurality of tokens on a computer readable medium accessible by said originating computer,

(b4) accessing said stored plurality of tokens from said originating computer,

(b5) transmitting said stored plurality of tokens from said originating computer to said handheld computing device, and,

(b6) receiving within said handheld computing device said transmission of said tokenized questionnaire from said originating computer

14. (*New*) The method for managing data according to Claim 12, wherein said originating computer and said recipient computer are a same computer.

15. (*New*) The method for managing data according to Claim 12, wherein said step (d1) comprises the steps of:

(i) requiring a user to authenticate with said handheld computing device,

(ii) only if the user is able to authenticate with said handheld computing device, executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a user, and,

(iii) if the user is unable to authenticate with said handheld computing device, taking no further action.

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16. (*New*) The method for managing data according to Claim 12, wherein said questionnaire comprises at least one question.

17. (*New*) The method for managing data according to Claim 16, wherein at least one of said at least one question is selected from a group consisting of a food quality question, a service quality question, a waiting time question, a store number question, a location question, a time question, a date question, a temperature question, and a time of day question.

18. (*New*) The method for managing data according to Claim 12, wherein step (a) comprises the step of establishing communications via the Internet between said handheld computing device and said originating computer.

19. (*New*) A method for managing data comprising the steps of:

(a) establishing communications between a handheld computing device and an originating computer, said handheld device having at least a capability to determine a current location thereof;

(b) receiving within said handheld computing device a transmission of a tokenized questionnaire, said tokenized questionnaire comprising a plurality of tokens;

(c) ending said communications between said handheld computing device and said originating computer;

(d) after said communications has been terminated,

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(d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least said current location of said handheld computing device, and,

(d2) storing within said handheld computing device said current location;

(e) establishing communications between said handheld computing device and a recipient computer; and,

(f) transmitting at least one value representative of said stored current location to said recipient computer.

20. (*New*) The method for managing data according to Claim 19 wherein said current location of said handheld computing device is determined using GPS.

21. (*New*) The method for managing data according to Claim 19, wherein said originating computer and said recipient computer are a same computer.

22. (*New*) The method for managing data according to Claim 19, wherein step (d2) comprises the steps of:

(i) determining at least one parameter value based on said current location,

(ii) storing within said handheld computing device said current location,

(iii) storing within said handheld computing device said determined at least one parameter value; and,

wherein step (f) comprises the steps of:

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(f1) transmitting a value representative of said stored current location to said recipient computer, and,

(f2) transmitting at least one of said at least one stored parameter value to said recipient computer.

23. (*New*) The method for managing data according to Claim 22, wherein each of said at least one parameter value is selected from a group consisting of a store number, a store location, a time of day, and a date.

24. (*New*) A method for managing data comprising the steps of:

(a) establishing communications between a handheld computing device and an originating computer;

(b) receiving within said handheld computing device a transmission of a tokenized questionnaire from said originating computer, said tokenized questionnaire comprising a plurality of tokens;

(c) ending said communications between said handheld computing device and said originating computer;

(d) after said communications has been ended,

(d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a first user, and,

(d2) storing within said computing device said at least one response from the first user;

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(e) establishing communications between said handheld computing device and a recipient computer;

(f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer; and,

(g) after receipt of said transmission of step (f), transmitting a notice of said received value representative of each of said at least one response to a second user.

25. (*New*) The method for managing data according to Claim 24, wherein the first user and the second user are a same user.

26. (*New*) A method for managing data comprising the steps of:

(a) within a central computer, accessing at least one user data item stored in a recipient computer, wherein said at least one data item is obtained via the steps of:

(1) establishing communications between a handheld computing device and an originating computer;

(2) receiving within said handheld computing device a transmission of a tokenized questionnaire, said tokenized questionnaire comprising a plurality of tokens;

(3) ending said communications between said handheld computing device and said originating computer;

(4) after said communications has been ended,

(i) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device,

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(ii) presenting said at least one question to a user;

(iii) receiving at least one response from the user to each of said presented at least one question,

(iv) storing at least one value representative of said at least one response within said handheld computing device;

(5) establishing a communications link between said handheld computing device and a recipient computer;

(6) transmitting said stored at least one value representative of said at least one response stored within said handheld computing device to said recipient computer; and,

(7) storing within said recipient computer any of said transmitted at least one value representative of said at least one response, thereby creating said at least one user data item stored in said recipient computer; and,

(b) forming a visually perceptible report from any of said at least one stored user data item so accessed.

27. (*New*) The method according to Claim 26, wherein said central computer and said recipient computer are a same computer.

28. (*New*) A method for managing data comprising the steps of:

(a) establishing communications between a handheld computing device and an originating computer;

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(b) receiving within said handheld computing device a transmission of a tokenized questionnaire, said tokenized questionnaire comprising a plurality of tokens;

(c) ending said communications between said handheld computing device and said originating computer;

(d) after said communications have been ended,

(d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one item of data, and,

(d2) storing within said handheld computing device said at least one item of data;

(e) establishing communications between said handheld computing device and a recipient computer; and,

(f) transmitting at least one value representative of said at least one item of data to said recipient computer.

29. (*New*) A method for managing data according to Claim 28, wherein at least one of said at least one item of data is selected from a group consisting of a GPS location, a temperature, an event timing, a current date, a current time, a user authentication information, an item of text, a numeric item, a time stamp, a user response, and, a user response to a question.

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30. (*New*) A method for managing data according to Claim 28, wherein said established communications between said handheld computing device and said originating computer is established using the Internet.

31. (*New*) A method for managing data according to Claim 28, wherein said originating computer and said recipient computer are a same computer.

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REMARKS

Claims **1-11** are pending in the application. Claims **1-11** stand as rejected in the Office Action. New claims **12-31** have been added. Reconsideration and allowance of Claims **1-31** is respectfully requested.

Amendments to the Specification

Not applicable.

Amendments to the Claims

Step (b) of Claim **9** has been amended to correct an obvious typographical error. As such, this amendment does not constitute new matter nor is it made to overcome prior art. Additionally, this claim has been amended to make clearer that the incremental changes that are transmitted to the remote computer and used in modifying the questionnaire that was transmitted there. This feature is discussed, among others, in paragraphs [**0020**] and [**0031**] of the instant application and, as such, this amendment does not constitute new matter.

New Claims **12-26** have been added to make clearer the invention claimed by Applicant.

Claim group **12-18** describes a method of managing data in which a connection is established between a handheld computing device and an originating computer, a tokenized questionnaire is transmitted to the handheld computing device, the communications are ended, the tokenized questionnaire is executed to collect at least one response from a user, and, after communications are again established, the at least one response is transmitted to a recipient computer. This series of steps in independent Claim **12** is described in great detail throughout

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the instant application (e.g., paragraphs [**0047**] to [**0058**]) and, as such, Claim **12**, and claims dependent therefrom, do not constitute new matter.

New Claim **16** provides some examples of the types of questions that might be asked of a user including a waiting time question ([**0066**]), a food quality question ([**0066**]), a service quality question ([**0066**]), a store number ([**0067**]), a location ([**0067**]), a time question ([**0067**]), a date question ([**0067**]), a temperature question ([**0070**]), and a time of day question ([**0081**]).

Claim group **19-23** sets out claim language that covers a method in which a connection is established between a handheld computing device that has a capability of determining its current location and an originating computer, a tokenized questionnaire is transmitted to the handheld computing device, the communications are ended, the tokenized questionnaire is executed to collect at least the current location of the handheld, and, after communications are again established, at least one value representative of the then-current location is transmitted to a recipient computer. This series of steps in independent Claim **19** is generally described throughout the instant application (e.g., paragraphs [**0047**] to [**0058**]). Additionally, location determination is discussed in paragraph [**0067**], among others, and, as such, Claim **19**, and claims dependent therefrom, do not constitute new matter.

Claims **24** and **25** claim methods substantially similar to those described above, but wherein an alert is sent to a second user after data has been uploaded. This feature of the invention is discussed [**0077**], among others. As such, these claims do not constitute new matter.

Claims **26** and **27** are substantially similar to those presented previously except that they contain the further step of accessing and using data collected via the previous methods. Accessing and using such data is, of course, discussed throughout the instant application including, for example, in paragraph [**0062**]. As such, these claims do not constitute new matter.

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Claim **28** is substantially similar to those described previously except that the questionnaire is said to collect at least one item of data. Such functionality is discussed throughout the instant application including, for example, paragraph [**0035**]. Additionally, and with respect to Claim **29**, examples of such a data item include a GPS location ([**0067**]), a temperature ([**0070**]), an event timing ([**0072**]), a current date ([**0032**]), a current time ([**0067**]), a user authentication information ([**0081**]), an item of text ([**0055**]), a numeric item ([**0055**]), a time stamp ([**0081**]), and a user response (discussed throughout, e.g., [**0059**]-[**0061**]). As such, these claims do not constitute new matter.

Finally, new Claims **30** and **31** adds a further limitation to Claim **26** in that these claims require that the communications between the handheld computing devices and the originating / recipient computers be established using the Internet. This capability is disclosed in, among others, paragraphs [**0026**] and [**0038**]. As such, these two claims do not constitute new matter.

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CLAIM OBJECTIONS AND REJECTIONS

Double Patenting

Claims **1-11** stand as rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims **1-14** of USPN 7,822,816.

In reply, the Applicant has included herewith a terminal disclaimer that is believed to have made this rejection moot.

Claim Rejections – 35 USC 102

Claims **1**, **5**, and **7** stand as rejected under 35 USC 102(e) as being anticipated by Lew, et al., US Patent Pub. 2004/0210472.

It is said on page 6 of the Office Action that, with respect to Claim **1**, Lew teaches a method for managing data that includes the steps of:

(a) creating a questionnaire [= survey] comprising a series of questions [paragraphs 0005-0009];

(b) tokenizing said questionnaire [= encrypted survey information, paragraph 0013]; thereby producing a plurality of tokens representing said questionnaire [paragraphs 0005-0009];

(c) transmitting said plurality of tokens to a remote computing device [= the survey transmitter may transmit to the remote responding device in either a wired or a wireless manner, paragraph 0053];

(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response [= feedback] from a user [= feed back from a user, paragraph 0036];

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(e) transmitting at least a portion of said response from the user to a server [= a central facility] via a network [paragraph 0050]; and

(f) storing said response at said server [= all feedback is transmitted to the central facility, S6100 of Fig. 2 and paragraph 0048].

With respect to Claim **5**, it is said that Lew further teaches wherein the transmission of said tokens in step (c) occurs via the network of step (e).

Applicant respectfully disagrees that Claims **1**, **5**, and **7** of the instant application are anticipated by Lew. Specifically, Applicant believes that Lew fails to teach or suggest at least Applicant's steps of tokenizing said questionnaire and/or executing at least a portion of the plurality of tokens to collect a response from a user.

However, assuming only for purposes of argument that Lew does indeed teach or suggest each and every step of Applicant's claimed invention as set out in Claim **1**, Applicant hereby offers, pursuant to 37 CFR 1.131, the Inventor's Declaration that is attached hereto as Exhibit A, which declaration establishes conception of the instant invention prior to Lew's earliest claimed priority date and at least as early as January 1, 2002, coupled with diligence from prior to Lew's earliest priority date through the date of filing of this application.

Applicant additionally submits herewith pursuant to 37 CFR 1.131 and attached hereto as Exhibit "B," a document entitled "*Bama Companies, Inc. Field Service Survey Application Technical Design*" that is dated August 30, 2001 (hereinafter referred to as the "Technical Design") to provide further evidence regarding Applicant's conception of the invention as set forth in the claims.

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It should be noted that both Exhibit A and Exhibit B have been previously presented to the Examiner in papers filed by the Applicant on September 24, 2007, and April 30, 2008, respectively, with Exhibit B being provided at the request of the Examiner to further establish Applicant's claim to priority. Additionally, the Examiner is reminded that he found Applicant's arguments in this regard persuasive as indicated in the Office Action of September 9, 2008 in paragraph 26, page 14.

Turning to Exhibit B, all of the steps of the method of at least Applicant's Claim **1** can be found in the Technical Design. It is believed that Applicant's attached declaration, in combination with the demonstration below, is clear evidence of the early conception of each of the independent claims of this application. Thus, and as an example only, the step-by-step elements of Claim **1** is set forth below with reference to the Technical Design.

1. A method for managing data including the steps of:

The Technical Design, p. 3 of 19 includes a Mission Vision statement consistent with the method of the preamble.

(a) creating a questionnaire comprising a series of questions;

The Technical Design, p. 4 of 19, in a section titled "Workflow", includes "Survey Design and Preparation" that will "take place on PCs or servers." In the section titled "Question Types" the different formats of questions are identified.

(b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire;

The Technical Design describes tokenizing of the designed questionnaire on p. 12 of 19, 13 of 19, and 14 of 19.

(c) transmitting said plurality of tokens to a remote computing device;

The "Workflow" section on p. 4 of 19 describes the transfer of the questionnaire (survey) from the "Administrator" to the "Shopper" via "HotSync."

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(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user;

The "Workflow" section on p. 4 of 19 identifies "Complete Assigned Survey".

(e) transmitting at least a portion of said response from the user to a server via a network; and

The "Workflow" section on p. 4 of 19 identifies "Send Completed Surveys and Email" via Hot sync.

(f) storing said response at said server.

The Technical Design, p. 10 of 19, last paragraph, identifies that once the surveys have been uploaded, they are placed into the corporate survey answer database.

Accordingly, taken together Exhibits A and B conclusively establish Applicant's conception at least as early as January 1, 2002, and diligence from that date until the filing of the instant application. Lew was published on October 21, 2004, from an application filed on July 24, 2003, claiming priority to a Provisional application filed on July 25, 2002.

Further, Lew does not claim the same subject matter as that claimed by Applicant. As stated previously, the claims of the Lew reference do not recite "tokenizing said questionnaire", as is required by Claims **1**, **5**, and **7** of the instant application. As a consequence, and for at least this reason, these claims do not claim the same patentable invention as Lew. MPEP 715.

Still further, Lew, a pending application, published during the pendency of the instant application — i.e., Lew published in October of 2004, and the instant application was filed in August of 2003 claiming the benefit of an August of 2002 provisional application. Thus, Applicant is not barred by Lew's published patent under 35 USC 102(b).

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As a consequence, by virtue of the enclosed Declaration under Rule 1.131 and other evidence, Lew has been removed as a prior-art reference with respect to the subject matter of the instant application. Reconsideration and allowance of Claim **1** is respectfully requested.

Additionally, and for at least the reasons set out above, Applicant respectfully requests reconsideration and allowance of Claims **5** and **7** which both depend from Claim **1** and have been rejected based on the same reference.

Claim Rejections – 35 USC 103

Claims **2-4**, **6**, and **9-11** stand as rejected under 35 USC 103(a) as being unpatentable over Lew as applied to Claim **1** and further in view of Sendowski.

In reply, Applicant notes that the foregoing has established a Claim **1** conception date at least as early as January 1, 2002, and diligence at least from that date until the instant filing date. As a consequence, Lew has been removed as a reference at least with respect to Claims **2-4** and **6**.

Further, Applicant's previous demonstration has additionally removed Sendowski as a reference at least with respect to these claims. Sendowski was filed March 29, 2002 and published October 23, 2003. However, the Applicant has conclusively demonstrated in his attached Declaration that he conceived at least as early as January 1, 2002, and that he exercised due diligence from at least the date of conception until the instant application was filed on August 19, 2003, claiming priority from a United States Provisional patent application filed August 19, 2002. Further, Sendowski does not claim the same invention as that claimed by the

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Applicant. Each pending claim (1-51) of the Sendowski reference requires a "branch script object", whereas the claims of the instant application do not include such an element. As a consequence, at least Applicant's Claims **2-4** do not claim the same patentable invention as that claimed by Sendowski.

Still further, Sendowski, a pending application, published during the pendency of the instant application — i.e., Sendowski was published in October of 2003, and the instant application was filed in August of 2003 claiming the benefit of August of 2002. Thus, Applicant is not barred by Sendowski's published patent under 35 USC 102(b).

As a consequence, by virtue of the enclosed Declaration under Rule 1.131, Sendowski has been removed as a prior-art reference with respect to the subject matter of the instant application, and rejection based on this reference for any reason is improper. Thus, Sendowski is traversed and **2-4** and **6** which depend from Claim **1** should be allowed to issue, which is respectfully requested.

With respect to Claims **9-11** as-amended, it is believed that Applicant's attached Declaration and other evidence have established a conception date for Claim **9** that predates both Lew and Sendowski.

Further, neither Lew nor Sendowski claim the same invention as that claimed by the Applicant. Each pending claim (1-51) of the Sendowski reference requires a "branch script object", whereas the claims of the instant application do not include such an element. As a consequence, at least Applicant's Claims **9-11** do not claim the same patentable invention as that claimed by Sendowski.

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As stated previously, the claims of the Lew reference do not teach or suggest modifying a questionnaire with incremental changes as is required by Claims **9-11** of the instant application. As a consequence, and for at least this reason, Applicant's claims **9-11** do not claim the same patentable invention as Lew.

Still further, neither Sendowski, nor Lew bar Applicant's claims under 35 USCV 102(b) as has been discussed previously.

As a consequence, by virtue of the enclosed Declaration under Rule 1.131, Sendowski and/or Lew have been removed as prior-art references with respect to the subject matter of the instant application and rejection based on this reference for any reason is improper. Thus, Sendowski is traversed and Claims **9-11** should be allowed to issue, which is respectfully requested.

The Examiner has additionally rejected Claim **8** as being unpatentable over Sendowski as applied to Claim **7** and in view of Joao, US Pat. Pub. 2001/0056374. It is said that Sendowski does not explicitly show assessing a charge for each transferred response received by the central computer, but Joao does.

Claim **8** depends from Claim **7** from which, as Applicant has already established, Sendowski has been removed as a reference.

Thus, Claim **8** depends from a claim believed to be allowable and, as such, should similarly be allowed. Thus, reconsideration and allowance of the instant rejection is requested.

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Applicant's Newly Presented Claims

Finally, and specifically with respect to Applicant's new claims, as has been indicated previously, it is believed that Lew and Sendowski have been removed as references and, thus, any rejection founded on one or the other of these references is improper .

However, assuming for purposes of argument that Applicant's previous 37 CFR 1.131 Declaration and additional information are not accepted for any reason, Applicant would additionally note that each of the new independent claims (i.e., Claims **12**, **19**, **24**, **26**, and **28)** requires some variation of the steps: establish communications between an originating computer and a handheld device, transfer a tokenized questionnaire comprised of a plurality of tokens to the handheld device, end communications, execute at least a portion of the tokens to collect data of some sort, establish communications with a recipient computer, and transfer at least one value representative of the collected data to the recipient computer.

Nothing of record in the prior art performs each and every one of these steps. As such, it is believed that each of the new independent claims (as well as those claims that are dependent therefrom) is allowable over Lew, Sendowski, and/or Joao – either individually or in any combination.

As such, it is requested that Applicant's new claims be allowed to issue.

In addition, it is believed that rejection of any of the new claims of the instant application based on this combination of references would be improper.

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* * *

This paper is intended to constitute a complete response to the Examiner's Office Action mailed 03/16/2011.

In view of the foregoing, Applicant submits that the rejections and objections offered in the Office Action have been overcome and should be withdrawn. It is further believed that the claims as-filed and as-amended are in condition for allowance which is respectfully requested. Early and favorable action is earnestly solicited.

Respectfully submitted,

September 16, 2011
Date

Scott R. Zingerman
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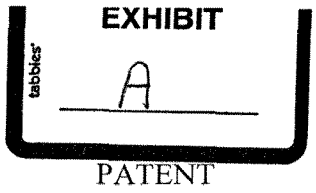

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	J. David PAYNE
Serial No.:	10/643,516
Filed:	08/19/2003
Confirmation No.:	4504
Title:	System and Method for Data Management
Art Unit:	2151
Examiner:	Nghi V. Tran

DECLARATION OF PRIOR INVENTION IN THE UNITED STATES TO OVERCOME CITED PATENTS UNDER 37 CFR 1.131

I, J. DAVID PAYNE, declare concerning the subject matter claimed in the above-identified application that:

1. I conceived and invented the entire subject matter of the above-identified patent application.

2. All of the acts of invention described herein took place in the United States.

3. Prior to January 1, 2002, I conceived the idea of a system and method for the management of data collected from a remote computing device wherein a questionnaire which may be represented by a plurality of tokens is transmitted to the remote computing device; the questionnaire is then executed by the remote computing device and at least a portion of the response(s) to the questionnaire is/are transmitted to a network which may be a loosely networked computer.

4. As is set out in more detail below, subsequent to January 1, 2002, I and others under my direction worked diligently to further reduce to practice and improve various

embodiments of this invention until the filing of my provisional patent application on August 19, 2002.

5. Prior to January 1, 2002 and at least until August 19, 2002, I was President of Macrosolve, Inc. ("Macrosolve"), the assignee of the present patent application.

6. Beginning in January 2002, Macrosolve moved to a larger facility to accommodate the hiring of additional employees, and specifically computer programmers, primarily for the purpose of writing code for my invention which was internally named "anyforms."

7. Macrosolve, Inc. kept track of the percentage of time each computer programmer and other related employees dedicated to projects within the company in the relevant time period. Schedules, with employee names redacted, including the percentage of time devoted by each such employee between January 1, 2002 and July 31, 2002, is attached hereto as Exhibit B.

8. Based on Exhibit B, the table below shows number of employees working on the "anyforms" project and the average percentage of each employee's time devoted to the "anyforms" project for the month indicated. The column on the right shows a calculation of the approximate total number of person hours spent on the "anyforms" project by month (assuming 4 weeks of 40 total hours per week).

MONTH	NO. OF EMPLOYEES WORKING ON THE "ANYFORMS" PROJECT	AVERAGE PERCENTAGE OF EACH EMPLOYEE'S TIME	TOTAL HOURS DEVOTED TO "ANYFORMS"
Jan. 2002	6	8	80
Feb. 2002	6	12	120
Mar. 2002	6	18	170
Apr. 2002	7	38	430
May 2002	7	76	850
June 2002	9	83	1190
July 2002	9	80	1150
		TOTAL	3990

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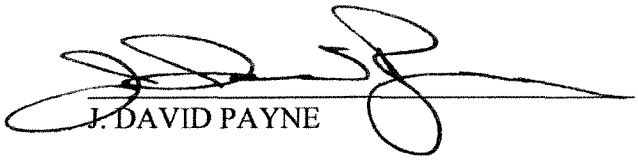
9. Accordingly, between January 1, 2002 and August 2002, approximately 3990 hours were spent by me, and others under my direction, diligently and without interruption on the "anyforms" invention which was the subject matter of the provisional patent application (USSN 60/404,491) filed on August 19, 2002, the date from which the present application claims benefit.

Declaration

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

Date: 8.17.07



J. DAVID PAYNE

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Exhibit "B"

MacroSolve
data collection solutions...

Bama Companies, Inc.
Field Service Survey Application

Technical Design

Version 1.3
August 30, 2001

Document: BAMA Technical Design.doc

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Confidential and Trade Secret

Application No. 10/643,516
Applicant: J. David Payne
TC/A.U.: 2151
Examiner: TRAN, NGHI V.
Docket No. 57442/03 ESB

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Part 1

Project Overview

EXECUTIVE SUMMARY

Based upon the further discussions between representatives from the Bama Companies, Inc. (BAMA) and MacroSolve, Inc. along with the database design provided by Brian Davis of BAMA, MacroSolve has defined and prepared the following technical design based upon meetings on August 8th, 2001 and on August 27th, 2001, the application survey, and previously released handheld application prototype.

This proposed solution would be an invaluable tool in expediting data flow as well as communication between BAMA and their Field Service Agents. The infrastructure of this solution will allow for simplistic introduction of new mobile enterprise solutions as they arise. In addition, it will include a high-level of software flexibility that will allow for simple questionnaire design and deployment to many Field Service Agents, with centralized system management. This flexibility combined with expedited data flow will enable vendors to better assure the quality of the products being served nation-wide.

Using this model as a foundation, BAMA will quickly be able to collect and retrieve data relevant to their products. This model will also allow for rapid system expansion into other arenas, and could provide for a future revenue stream for BAMA. In addition, by laying this foundation, BAMA will quickly and cheaply be able to respond to other mobile data collection needs as they arise in the future.

PROJECT TEAM

Mike Payne	MacroSolve	Project Manager	mike@macrosolve.com	918.280.8693
Geremy Ferguson	MacroSolve	Lead Developer	geremy@macrosolve.com	918.280.8693
Brian Davis	BAMA		bdavis@bama.com	918.732.2010
Parks Pendergraft	BAMA		ppenderg@bama.com	918.732.2123
Mike Slimak	BAMA		mslimak@bama.com	

MISSION VISION

To design, develop, and deploy a cost-effective handheld-based application that will provide a user-friendly interface for effectively designing surveys or questionnaires and then collecting the corresponding data. All the while including great flexibility for future enhancements.

TECHNICAL DESIGN APPROVAL

The MacroSolve Technical Design for BAMA Field Service system is accepted in full.

Client

Approved by BAMA: _____ Date: _____

MacroSolve

Project Manager: _____ Date: _____

Lead Developer: _____ Date: _____

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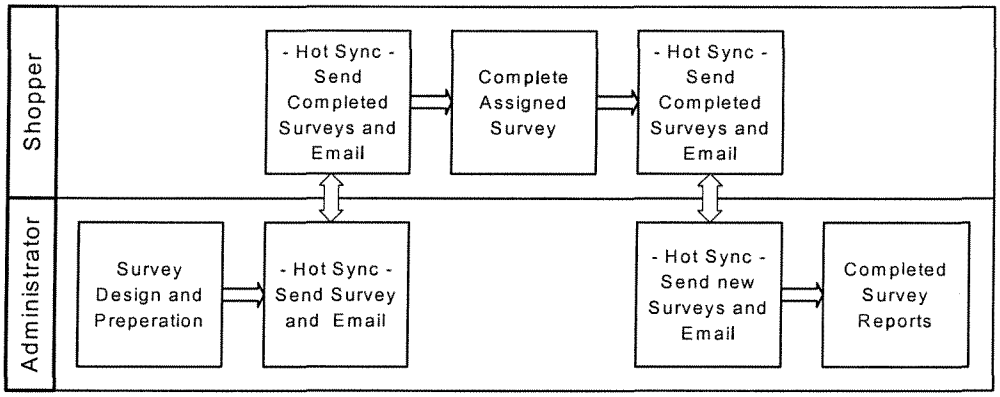
Part 2

Application Overview

WORKFLOW

The figure below shows the two distinct areas of the *Field Service Survey Application*. The "Shopper" part of the workflow illustrates processes that will reside on the handheld and be designed by MacroSolve. The lower "Administrator" section illustrates processes that will take place on PCs or servers. These processes will be designed via the combined efforts of MacroSolve and BAMA.



QUESTION TYPES

Text – Answers based upon words or phrases
- Prompt Example: Describe the location of the filling.
- Palm OS object used: Field

Scale – Answers are based upon a specified range of numbers
- Prompt Example: Rate the color of the pie from 1 to 7:
- Palm OS object used: Spinner

Numeric – Only a number is accepted as a correct answer
- Prompt Example: Temperature of the pie?
- Palm OS object used: Field

Multiple Choices – Several answers are given of which one must be chosen.
- Prompt Example: Select the crust color:
- Palm Os object used: Pull Down List

Date – Date will be accessed from the handheld unit. User will have the option to change it.
- Prompt Example: Date of visit? 8/16/2001.
- Palm OS object used: Field

Yes/No – Question in which only "Yes" or "No" are appropriate answers.
- Prompt Example: Was the 2 for 1 special going on?
- Palm OS object used: Checkboxes or Buttons

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Rich Text – This *Lotus Notes* defined question will need to be further examined before including it in the *Field Service Survey Application* and should be seen as a future add-on.

ELECTRONIC MESSAGING SYSTEM

The *Electronic Messaging* System provides a communication link between the handheld user and the system administrator. It will be an imperative component so that the Survey Administrator may give out assignments to shoppers as well as passing on any other important messages. It has been decided that the Palm OS Mail version 3.0 that comes with each Handspring Visor Deluxe will be the mail system used in the *Field Service Application*. The user will have to exit out of the *Field Service Application* in order to access the Palm OS Mail system and then reenter the *Field Service Application* to continue the survey process. Application details of the Palm OS Mail system can be presented at a later date if needed.

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Part 3

Survey Design & Preparation Process

NARRATIVE

The design and processes that follow are at the discretion of BAMA. The MacroSolve imperative components include how the data looks and where it is located. This is further defined in *Section 8: PC Storage Specifications.*

FLOW CHART

Task Allocation: BAMA

Please provide a process flow and any other necessary information that describes the Survey Design & Preparation Process.

SCREEN IMAGES

Task Allocation: BAMA

Please provide screen images and any other necessary information that describes the Survey Design & Preparation Process.

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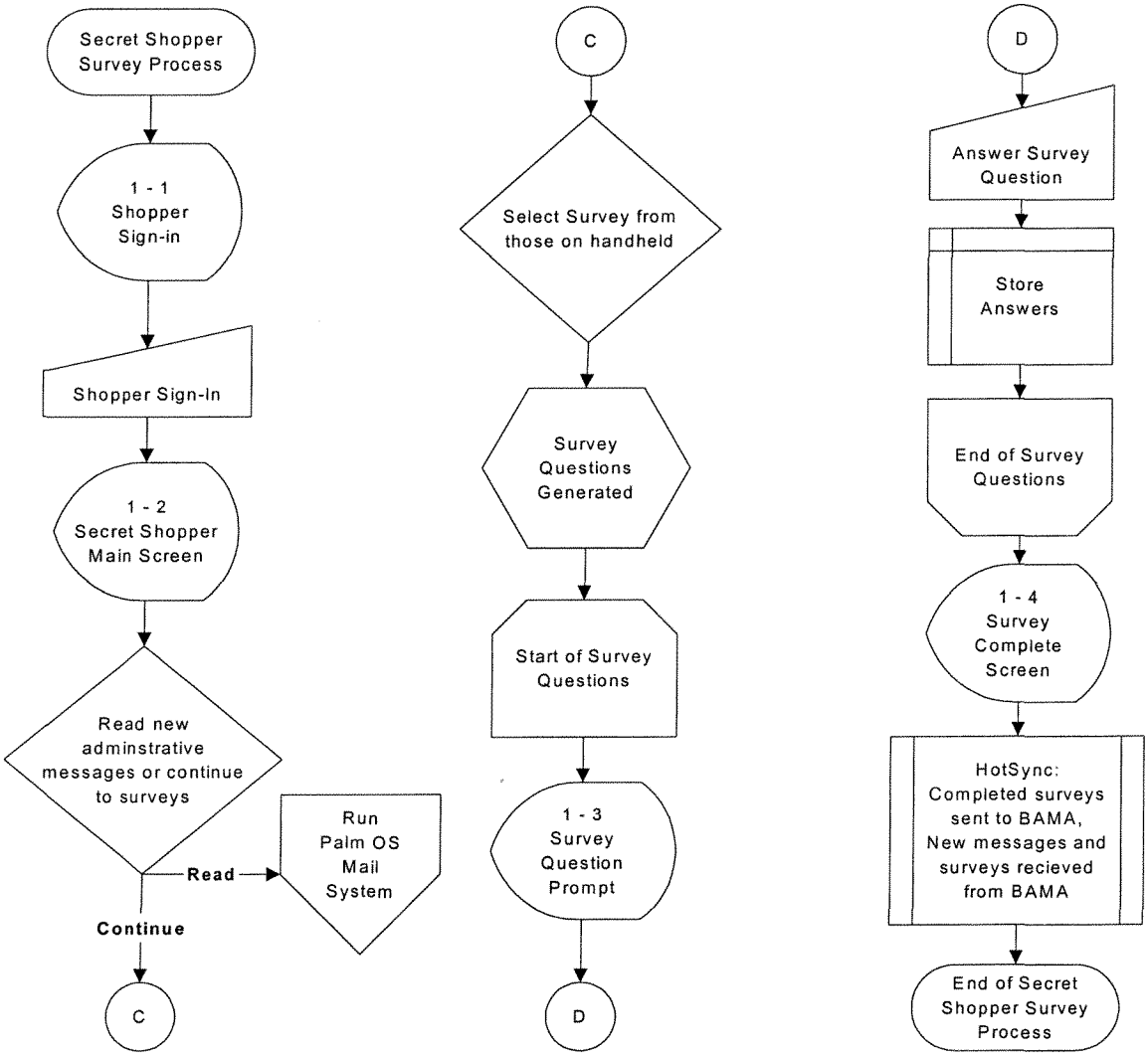
Part
4 Field Service Survey Process

NARRATIVE

The following process depicts the handheld relevant processes involved in the *Field Service Application.* This process allows the Shopper to complete surveys and allows a method by which to start the Palm OS Mail System. Also depicted are several of the screens involved in the illustrating and collecting the data. Technical details of how this data is collected along with more complete listing of the data to be collected can be found in the diagrams and tables below.

FLOW CHARTS



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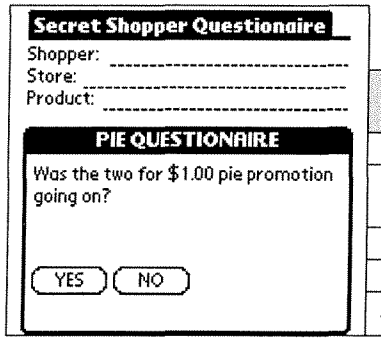
Flow 1 – 1
Screen Name Sign-in

Object Name	Object Type	Object Purpose	Table.Field
Sign-in	Field	Input Shopper Identification	answer.shopper_id
Go	Button	Go to Main Screen	N/A

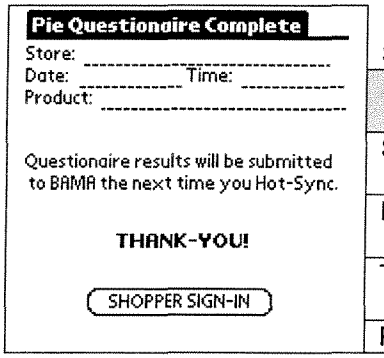
Flow 1 – 2
Screen Name Main

Object Name	Object Type	Object Purpose	Table.Field
Messages	Button	Go to Messages Screen	N/A
New	Field	Display only when new messages	N/A
Surveys	List	Display surveys present on handheld	Σ(question)



Flow 1 – 3
Screen Name Question

Object Name	Object Type	Object Purpose	Table.Field
Shopper	Field	Display Shopper ID	answer.shopper_id
Store	Field	Display Store Name and Number	answer.company_name + answer.store_num
Product	Field	Display product	answer.product_name
Question	Field	Display question	question.question_text
Answer	Various	Survey Answer to Store	answer.survey_answer



Flow 1 – 4
Screen Name Finish

Object Name	Object Type	Object Purpose	Table.Field
Store	Field	Display Store Name and Number	answer.company_name
Date	Field	Display Date product test completed	answer.date
Time	Field	Display time product test completed	answer.time
Product	Field	Display product	answer.product_name

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Part
5 Conduits Processes

CONDUIT OVERVIEW

A conduit is a software plug-in for the *HotSync Server* that enables the exchange of information between Palm OS devices and corporate data stores. Conduits do not routinely require user interaction with the data and are run upon initiation of a HotSync. Once implemented, conduits will allow data to flow freely and easily between handheld units and the desired data stores, while not requiring any difficult data conversion by technical or administrative personnel.

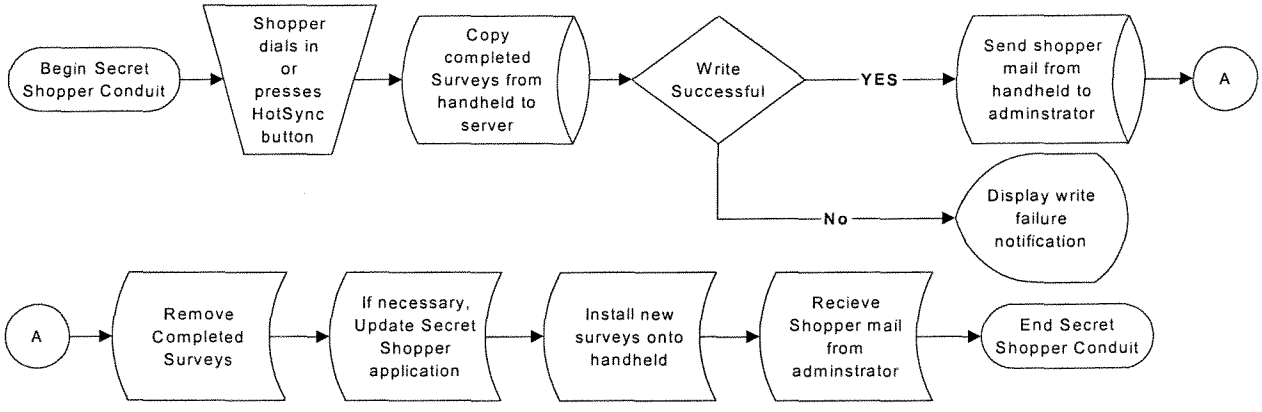
Currently, two conduits have been identified as necessary for this solution. The first, a pre-packaged conduit, included with *HotSync Server,* which allows Palm OS devices to share information with *Lotus Notes Server*. This conduit will be used to transfer messages between the handheld and the Survey Administrator client PC. The second is a custom-built conduit necessary for information exchange between the *Field Service Survey Application* and BAMA corporate survey databases. Since the conduit for the *Lotus Notes Server* comes standard with *HotSync Server*, it will not be elaborated upon here. A detailed process flow of *Lotus Notes Server* conduits may be produced, upon request, at a later date.

CUSTOM CONDUIT NARRATIVE

The MacroSolve designed conduit will take a *Lotus Domino* database and extract the necessary data components in order to create a Palm Database capable of then producing the surveys. It will also provide a method by which information will flow from the handheld unit through the *HotSync Server* to *Lotus Notes*. Below is the basic conduit process flow for information exchange between the handheld unit and the *HotSync Server*.

During the design and early testing phases of this project the conduit will be setup to interact with a Microsoft SQL 7 Server database. As the project nears completion and in the final testing and implementation phases the conduit will be setup to interact with the BAMA survey databases using the *Lotus NotesSQL 3.0* as discussed on August 27th, 2001.

FLOW CHART



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Part
6 HotSync Server

HOTSYNC SERVER OVERVIEW

HotSync Server enables the transfer of data between the handheld and the server. Combining *HotSync Server* with the proper conduits, will allow a shopper to easily transfer information, i.e. completed surveys and messages, from the handheld into the corporate network where the MacroSolve designed conduit and the *Lotus Notes* conduit will reformat the data so that it can be interrupted by the *Lotus Notes* system. *HotSync Server* will allow the *Field Service Survey Application* to be updated with out requiring the shopper to do anything other than HotSync the unit. *HotSync Server* will also provide for easy backup and restoration of handheld data should they be necessary.

HotSyncing can be accomplished in several ways.

1. *Modem HotSync* - The preferred method for the *Field Service Survey Application* is a HotSync connection via a Handspring Springboard Modem. After inserting the modem module into the Handspring Visor and then connecting the modem to a typical phone jack, the shopper must then initiate the modem HotSync by starting the Palm OS standard HotSync application on the handheld, and selecting a properly setup modem connection that will connect the shopper to the BAMA corporate network through a *RAS (Remote Access Server).*

2. *Desktop HotSync* - Pressing the HotSync button on the handheld cradle will initiate a direct cable connection to a desktop PC. This connection only works assuming that the cradle is connected to a PC that then has a network connection to the BAMA corporate network or that the PC has a modem that can dial out and connect to a server that resides on the BAMA corporate network.

3. *Infrared HotSync* - Since the *Handspring Visor Deluxe* has an infrared port, it can synchronize with a desktop computer equipped with an infrared (IR) port that supports the IrCOMM implementation of the Infrared Data Association (IrDA) standard. The user would set up the HotSync Manager to use the desktop's IR port and selects the IR option in the HotSync client on the handheld.

When a HotSync is initiated several functions are carried out. First, a list of creator IDs on the handheld is compared to a list of conduits registered to the various creator IDs. When corresponding IDs are found, the conduit for that ID is executed and information is exchanged. In the case of the *Field Service Survey Application,* the MacroSolve designed conduit will first check for new surveys or new versions of surveys to upload to the handheld. When a newer version of a survey is placed on the handheld, the old version is removed. In order to retire a survey or take it out of circulation and "00" will be used as the version number. This "00" will tell the conduit to remove the existing handheld survey, but not to upload a different version of the survey.

Once the surveys have been uploaded, updated, or removed, any answer databases located on the handheld are removed from the handheld and placed into BAMA corporate survey answer database. Once these *Field Service Survey Application Conduit* sequences are complete, HotSync will continue through its list of conduits until all have been completed. Using the HotSync technology it is possible to control how information is exchanged between the BAMA corporate network and each shopper's handheld.

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Installation and setup of the server software will require the following procedures:

1. Install Palm *HotSync Server* software
2. Install *Lotus Notes* conduit
3. Set up Shopper profiles
4. Test Palm *HotSync Server* software *Lotus Notes* conduit
5. Distribute Palm OS User Setup Program and Palm *HotSync Server* connection information
6. Run the Palm OS User Setup Program for each Shopper
    a. The Palm OS User Setup Program installs the Palm OS client and desktop proxy agent and allows entry of the Palm *HotSync Server* connection information. This will be an optional function depending upon whether or not desktop connectivity from Shopper to BAMA is desired. The User Setup Program can be distributed via the corporate intranet or via enterprise system management tools that proactively distribute software to the desktop. Each Palm handheld user will run the User Setup Program followed by the familiar desktop synchronization process to install the Palm OS client on the handheld.
7. Install the Palm OS client on each Shopper's handheld

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Part 7

Handheld Storage Specifications

NARRATIVE

This section describes the basic design of the database tables, relationships between the tables, and detailed definitions of the table fields, as they will appear on the handheld unit. Both the Question and Answer tables for each survey will reside separately in its own file while on the handheld. Each file will be named using the following naming conventions discussed below.

QUESTION TABLE DESIGN

Database Name: "Survey Name" + "Survey Version".pdb
Database Type: SURV
Database Creator: BAMA
Database Purpose: Stores the Survey Question Information on the Handheld

R	Field #1	Field #2	Field #3	Field #4	Field #5	Field #6	Field #7+
0	Company Name	Product Name	Survey Version	N/A	N/A	N/A	N/A
1	Q Num	Q Type	L Num	Q Text	Default A	Instructions	L Value
2	Q Num	Q Type	L Num	Q Text	Default A	Instructions	L Value
3	Q Num	Q Type	L Num	Q Text	Default A	Instructions	L Value
...	...	...	...	...	...	...	...

ANSWER TABLE DESIGN

Database Name: "Survey Name" + "Survey Version" + "Store Number".pdb
Database Type: ANSR
Database Creator: BAMA
Database Purpose: Stores the Survey Answers on the Handheld

R	Field #1	Field #2	Field #3	Field #4	Field #5	Field #6	Field #7
0	Company	Product Name	Survey Version	Shopper ID	Store Num	Date	Time
1	Q Num	Survey Answer	N/A	N/A	N/A	N/A	N/A
2	Q Num	Survey Answer	N/A	N/A	N/A	N/A	N/A
3	Q Num	Survey Answer	N/A	N/A	N/A	N/A	N/A
...	...	...	...	...	...	...	...

TABLE RELATIONSHIPS

The relationship between the Question and Answer Database tables is based upon:

- Survey Name
- Survey Version
- Question Number

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QUESTION FIELDS DEFINED

Name	Type	Length	Purpose
Company_Name	String	25	Name of the company where the survey is being taken
Product_Name	String	25	Name of the product being surveyed
Survey_Version	Integer	5	Version number of the survey
Question_Number	Integer	5	Number of the question in the survey
Question_Type	String	25	Type of question in the survey (see *Part 2: Question Types)*
List_Number	Integer	5	If the question type is "Multiple Choice" this will be the number of possible values
Question_Text	String	150	Actual text of the question
Default_Answer	String	25	Default answer for the question
Instructions	String	150	Any instructions that are needed
List_Value	String	25	A possible "Multiple Choice" answer, a new field will be appended to the database for each multiple choice answer

ANSWER FIELDS DEFINED

Name	Type	Length	Purpose
Company_Name	String	25	Name of the company where the survey is being taken
Product_Name	String	25	Name of the product being surveyed
Survey_Version	Integer	5	Version number of the survey
Shopper_ID	String	10	Unique ID of shopper
Store_Number	Integer	10	Unique store ID number
Survey_Date	Integer	8	Date survey completed
Survey_Time	Integer	8	Time survey completed
Question_Number	Integer	5	Number of the question in the survey
Survey_Answer	String	150	Answer to the survey question

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Part
8 PC Storage Specifications

NARRATIVE

This section describes the detailed definitions of the table fields, as they will appear on the Survey Administrator Client or on the main server. The database files will be flat and un-normalized. The conduit (*See Section 5: Conduit Processes)* will take the data in a given table and set it up in the Palm OS format. In a similar fashion the conduit will take the *Answer Palm Database*, and set it up so that it can be placed into the BAMA corporate survey databases. As of the MacroSolve – Brian Davis meeting on August 27, 2001, it was decided that two large tables would house the Question and Answer tables' separately.

During the aforementioned meeting, Mr. Davis stated that he wanted to combine the "Company_Name" and "Product_Name" fields into on field called "Survey_Name". This was done but during the revision and review processes of this document, it was decided that for future enhancements and to enable the ability to access each piece of data separately (i.e. if only the "Product_Name" was needed and not the entire "Survey_Name") that the two fields should remain separated from one another. If requested by BAMA, it is possible for the conduit to combine the "Company_Name" and "Product_Name" fields into one field named "Survey_Name" when the Answer table is transferred from the handheld into the BAMA corporate survey databases.

QUESTION FIELDS SPECIFIED

Name	Type	Length	Purpose
Company_Name	String	25	Name of the company where the survey is being taken
Product_Name	String	25	Name of the product being surveyed
Survey_Version	Integer	5	Version number of the survey
Question_Number	Integer	5	Number of the question in the survey
Question_Type	String	25	Type of question in the survey (see *Part 2: Question Types)*
List_Number	Integer	5	If the question type is "Multiple Choice" this will be the number of possible values
Question_Text	String	150	Actual text of the question
Default_Answer	String	25	Default answer for the question
Instructions	String	150	Any instructions that are needed
List_Value	String	25	A possible "Multiple Choice" answer, a new field will be appended to the database for each multiple choice answer

ANSWER FIELDS SPECIFIED

Name	Type	Length	Purpose
Company_Name	String	25	Name of the company where the survey is being taken
Product_Name	String	25	Name of the product being surveyed
Survey_Version	Integer	5	Version number of the survey
Shopper_ID	String	10	Unique ID of shopper
Store_Number	Integer	10	Unique store ID number
Survey_Date	Integer	8	Date survey completed
Survey_Time	Integer	8	Time survey completed
Question_Number	Integer	5	Number of the question in the survey
Survey_Answer	String	150	Answer to the survey question

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Part 9 Future Components

SCHEDULING

The Scheduling component mentioned in the *Application Survey* was removed for the *Technical Document's* scope of *Field Service* Survey Project. Adding the Scheduling component back into future versions could enable the Survey Administrator to send a message to a specified user that would appear as appointment in the Schedule component rather than just a message in the Palm OS Mail System as has been set up in this document.

PROFILES

A Profile component was mentioned in the *Application Survey*. Based upon a Shopper's unique identification number, the Profile component would allow the individual user to easily update personal information (i.e. address, phone, etc.) without having to call in or compose a full-length message to the Survey Administrator.

HARDWARE

Selecting the Handspring Visor Deluxe allows a great deal of flexibility in software and hardware. As mention in the scope meeting between MacroSolve and BAMA on August 8, 2001, the Visor's Springboard port allows for the addition of many different but useful pieces of hardware.

Those hardware modules that have been discussed are:

- Cameras
- Temperature Probes
- Wireless Connectivity Modules

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Part 10 Investment Summary

SOFTWARE AND SERVICES

Part Number	Description	Investment
MS-APPDEV	Application Development per approved BAMA Technical Design – 1-3	$ 16,500.00
MS-ASDISC	Application Survey Discount	- $ 1,500.00
	TOTAL SOFTWARE AND SERVICES	**$ 15,000.00**

Terms:

- Quote expires: 30 Days from receipt
- Travel and allowance: Billed as actual per occurrence
- Payment: 50% Start/50% Delivery
- Order Cancellation: Orders cancelled after PO has been issued are subject to 15% surcharge + applicable manufacturers restock fee.
- Hardware Warranty: Manufacturers warranty pass through
- Shipping: Billed as actual per occurrence to client
- This quotation should be considered **proprietary and confidential**

HARDWARE AND INFRASTRUCTURE

Proposed Handheld Unit: Handspring Visor™ Deluxe

The Handspring Visor™ Deluxe is the handheld computer that will best fit the Field Service Application requirements. It features an expandability port that will allow for easy addition of a modem or camera. Each Visor™ Deluxe features 8MB of internal memory, uses two AAA batteries and includes *Field Service Application* required HotSync USB cradle, Stylus, Palm Desktop software, and Leather slip-case.

Suggested Retail Price: $199/unit

Proposed Handheld Modem: 56K Thinmodem-Plus

The 56K Thinmodem-Plus provides a fast 56k/v.90 wireline modem while not requiring an additional battery unit or consuming additional battery power from the Visor™ Deluxe's internal power supply. This will mean longer Visor™ Deluxe battery life when compared to certain modems and will not add any substantial weight or size to the Visor™ Deluxe unit. It also provides 8MB of Flash Memory in the same card unit, which will be necessary if a nonvolatile data backup solution is also desired. This solution would add a greater level of fault tolerance and data reliability for the proposed handheld units.

Suggested Retail Price: $149.95/unit

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Proposed HotSync Server: Palm HotSync Server

HotSync is the foundation server technology that powers an extended information infrastructure - enabling connection and management of handheld devices being used in the field by Field Service Agents. HotSync works in both wired and wireless environments in batch and real-time modes to connect and manage handheld devices and applications.

User Licenses	Cost
5	$2,111
50	$11,872
250	$24,425
500	$30,339

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Part 11 Schedule

Project Schedule will be provide upon approval of Technical Design.

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Part 12 Glossary

A	Abbreviation for "Answer(s)"
Button	Buttons display a text label in a box. The default style for a button is a text string centered within a rounded rectangle. Buttons have rounded corners unless a rectangular frame is specified. A button without a frame inverts a rounded rectangular region when pressed. When the user taps a button with the pen, the button highlights until the user releases the pen or drags it outside the bounds of the button.
Checkbox	Check boxes display a setting, either on (checked) or off (unchecked). Touching a check box with the pen toggles the setting. The check box appears as a square, which contains a check mark if the check box's setting is on. A check box can have a text label attached to it; selecting the label also toggles the check box. Push buttons and check boxes can be arranged into exclusive groups; one and only one control in a group can be on at a time.
Creator, Database	This is a field stored in the Palm OS database header that is 4 bytes in size. The system uses this field to distinguish application databases from data databases and to associate data databases with the appropriate application.
Field	A field object displays one or more lines of text.
L	Abbreviation for "List(s)"
List	The list object appears as a vertical list of choices in a box. The current selection of the list is inverted.
Pull Down List	A pull down list is a combination of a Palm OS selector trigger and a Palm OS list.
Q	Abbreviation for "Question(s)"
R	Abbreviation for "Record(s)"
S	Abbreviation for "Survey(s)"
Selector Trigger	A selector trigger displays a text label surrounded by a gray rectangular frame. If the text label changes, the width of the control expands or contracts to the width of the new label.
Spinner	A MacroSolve designed object that is the summation of a Palm OS field and two Palm OS buttons. Essentially with each press of the button the corresponding field is either incremented or decremented.
Type, Database	This is a field stored in the Palm OS database header that is 4 bytes in size. The system uses this field to distinguish application databases from data databases and to associate data databases with the appropriate application.

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Electronic Patent Application Fee Transmittal

Application Number:	12910706
Filing Date:	22-Oct-2010
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Filer:	Scott R. Zingerman/Carol Welch
Attorney Docket Number:	71855/10-351

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	11	26	286
Independent claims in excess of 3	2201	5	110	550
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

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Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Extension - 3 months with $0 paid	2253	1	555	555
Miscellaneous:				
			Total in USD ($)	**1391**

Electronic Acknowledgement Receipt

EFS ID:	10965685
Application Number:	12910706
International Application Number:	
Confirmation Number:	8703
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Customer Number:	22206
Filer:	Scott R. Zingerman/Carol Welch
Filer Authorized By:	Scott R. Zingerman
Attorney Docket Number:	71855/10-351
Receipt Date:	16-SEP-2011
Filing Date:	22-OCT-2010
Time Stamp:	14:09:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1391
RAM confirmation Number	457
Deposit Account	060540
Authorized User	ZINGERMAN,SCOTT R.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	ResponseToOfficeActionMailed3_16_2011.pdf	1299019 20a41f1334507e52459c49d7be8a94385705ba51	no	48
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	33634 e42534a0eafd43dbe76901f2251466a4d3b82537	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1332653		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
12/910,706	10/22/2010	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 09/16/2011	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 31	Minus	** 20	= 11	X $26 =	286	OR	X $ =	
Independent (37 CFR 1.16(h))	* 8	Minus	***3	= 5	X $110 =	550	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	836	OR	TOTAL ADD'L FEE	

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

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

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

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

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

Legal Instrument Examiner:
/CAROL BARNES/

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

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

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12910706
Filing Date	2010-10-22
First Named Inventor	Payne
Art Unit	2451
Examiner Name	Nghi V. Tran
Attorney Docket Number	71835/10-351

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6826726		2004-11-30	HSING, ET AL.	
	2	7739658		2010-06-15	WATSON, ET AL.	

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Page 133 of 2584

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12910706
	Filing Date	2010-10-22
	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	Nghi V. Tran
	Attorney Docket Number	71835/10-351

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	"dcLINK The Total Solution", 08/1999, Publisher: Internet printout, Published in: US	☐
	2	DSI Internet Printout entitled "Marketing Collateral," dated 02/24/2002, Publisher: Internet Printout, Published in: US	☐
	3	2002 DSI Press Releases dated 4/08/2002 , Publisher: Internet	☐

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12910706
Filing Date	2010-10-22
First Named Inventor	Payne
Art Unit	2451
Examiner Name	Nghi V. Tran
Attorney Docket Number	71835/10-351

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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

OR

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

☐ See attached certification statement.

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

☐ None

SIGNATURE

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

Signature	/scott r. zingerman/	Date (YYYY-MM-DD)	2011-09-21
Name/Print	Zingerman, Scott R.	Registration Number	35422

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Electronic Patent Application Fee Transmittal

Application Number:	12910706
Filing Date:	22-Oct-2010
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Filer:	Scott R. Zingerman/Carol Welch
Attorney Docket Number:	71855/10-351

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	10998697
Application Number:	12910706
International Application Number:	
Confirmation Number:	8703
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Customer Number:	22206
Filer:	Scott R. Zingerman/Carol Welch
Filer Authorized By:	Scott R. Zingerman
Attorney Docket Number:	71855/10-351
Receipt Date:	21-SEP-2011
Filing Date:	22-OCT-2010
Time Stamp:	12:15:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$180
RAM confirmation Number	16792
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

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1	Non Patent Literature	dcLinkDataCollectionSystemExecOverview.pdf	5091510 f58bbe363ccdc527f7ac8fbd02c77123218ea985	no	22
Warnings:					
Information:					
2	Non Patent Literature	dcLinkWebPage_MarketingCollateral.pdf	47436 d1f17b75c9f9b94dcb45ec4e0d21600d168c86b5	no	1
Warnings:					
Information:					
3	Information Disclosure Statement (IDS) Form (SB08)	SupplementalIDS.pdf	612284 5dbf427b6d6489fe8338cdd5585c4562cc119d83	no	4
Warnings:					
Information:					
4	Non Patent Literature	dcLinkMediaRelease04-08-2002.pdf	445749 6d630bae237022529b35f32d61644e8c80d8ddfc	no	6
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	30430 f2ea028208536f7439122596fa12b22044efdc7a	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	6227409		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/910,706	10/22/2010	J. David Payne	71855/10-351	8703

22206 7590 09/20/2012

FELLERS SNIDER BLANKENSHIP
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321 SOUTH BOSTON SUITE 800
TULSA, OK 74103-3318

EXAMINER	
TIV, BACKHEAN	
ART UNIT	PAPER NUMBER
2451	

MAIL DATE	DELIVERY MODE
09/20/2012	PAPER

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

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

Office Action Summary	Application No.	Applicant(s)	
	12/910,706	PAYNE, J. DAVID	
	Examiner	Art Unit	
	BACKHEAN TIV	2451	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☒ Responsive to communication(s) filed on *16 September 2011*.

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

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

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

Disposition of Claims

5)☒ Claim(s) *1-31* is/are pending in the application.

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

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-31* is/are rejected.

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

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

Application Papers

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

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

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

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

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/21/11*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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DETAILED ACTION

Claims 1-31 are pending. Claims 12-31 were newly added. This is a response to the Remarks/Amendments filed on 9/16/11.

Note: This application has been assigned to a new examiner.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 9/21/11 has been considered.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-31 of the instance application are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 7,822,816. Although the conflicting claims are not identical, they are not patentably distinct from each other because the limitation of claims 1-31 of the instance application is overlapping with the limitation of claims 1-14 of U.S. Patent No. 7,822,816 in view of US Patent 5,704,029 issued to Wright, Jr.(Wright) , Warthen, US Publication 2002/0007303 issued to Brookler et al.(Brookler)., US Patent 6,477,373 issued to Rappaport et al.(Rappaport) and/or an obvious and well-known variant.

U.S. Patent No. 7,266,600	**Instant Application No. 11/738,732**
1. A method for managing data including the steps of:	1. A method for managing data including the steps of:
a) creating a questionnaire comprising a	(a) creating a questionnaire comprising a

series of questions;	series of questions;
(b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire;	(b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire;
(c) establishing a first wireless modem or wireless LAN network connection with a remote computing device;	
(d) transmitting said plurality of tokens to a remote computing device via said first wireless modem or wireless LAN network connection;	(c) transmitting said plurality of tokens to a remote computing device;
e) terminating said first wireless modem or wireless LAN network connection with said remote computing device;	
(f) after said first wireless modem or wireless LAN network connection is terminated, executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user;	(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user;
(g) establishing a second wireless modem or wireless LAN network	

connection between said remote computing device and a server;	
(h) after said second wireless modem or wireless LAN network connection is established, transmitting at least a portion of said response from the user to said server via said second wireless modem or wireless LAN network connection; and	(e) transmitting at least a portion of said response from the user to a server via a network; and
(i) storing said transmitted response at said server.	(f) storing said response at said server.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12-31 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The applicant has provided para.0047-0058, for support for claims 12-31, however, those paragraph does not teach at least the limitation of, "ending said

communication between said handheld computing device and said originating computer; after said communication has ended…….", the closest support for this limitation is para.0048,

[0048] As noted above, with regard to the present invention, the term "loosely networked" is used to describe a networked computer system wherein devices on the network are tolerant of intermittent network connections. In particular, if any communication connection is available between devices wishing to communicate, network transmissions occur normally, in real time. If a network connection is unavailable, the information is temporarily stored in the device and later transmitted when the connection is restored. Unless otherwise specified, hereinafter the terms "network" or "networked" refer to loosely networked devices.

Which only describes that the network connection is unavailable. It does not describe the "ending of communication", and after the communication has ended, to perform the steps of (d1). Ending communication and a network connection being unavailable are different as ending communication is an active step while having a network connection being unavailable is merely the state of connection.

As per claim 15, recites the steps of "authenticate with said handheld computing device.....(ii) only if the user is able to authenticate....(iii) if the user is unable to authenticate", the closest support for this limitation is para. 0084, in which only describes "optional authentication of users", this support is insufficient to support the totality of claim 15.

As per claim 22, recites the steps of "determining at least one parameter…….", the closest support is para.0070 which describes, "handheld computer is equipped with GPS receiver", this support is insufficient to support the totality of claim 22.

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-11,18, 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 7,8, recites “making available on **the Web**”, there is insufficient antecedent basis for this limitation in the claim.

As per claim 9-11, recites, the creation at a first site in a first computer located at a second site, where the first and second site is connected by a network, which is unclear and indefinite. As it unclear to the meaning of "site", it appears the specification recites only "site" as web site. In which, it is unclear how a first web site in a first computer can be located at a second web site.

As per claim 18 recites “**the Internet**”, there is insufficient antecedent basis for this limitation in the claim.

As per claim 26, recites, "(b) forming a visually.....user data **item so** accessed", it is unclear to what the applicant is claiming.

Claim Rejections - 35 USC § 103

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

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,704,029 issued to Wright, Jr.(Wright) in view of US Patent 6,584,464 issued to Warthen in view of US Publication 2002/0007303 issued to Brookler et al.(Brookler).

As per claim 1, Wright teaches a method for managing data including the steps of: (a) creating a questionnaire comprising a series of questions(Figs.1-11, Abstract); (b) thereby producing a plurality of tokens representing said questionnaire(Figs.1-11, Abstract); (c) transmitting said plurality of tokens to a remote computing device(col.13, lines 38-65); (d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user(col.13, lines 38-65).

Wright however does not explicitly teach tokenizing said questionnaire; (e) transmitting at least a portion of said response from the user to a server via a network; and (f) storing said response at said server. Wright however does suggest that the questionnaire is tokenized(Figs.1-11, Abstract, col.25, lines 1-50).

Warthen explicitly teaches the known art of tokenizing(Abstract).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright to use the known method of tokenizing as taught by Warthen in order to provide the predictable result of tokenizing a survey.

One ordinary skill in the art would have been motivated to combine the teachings in order to produce electronic surveys and feedback(Wright, Abstract).

Wright in view of Warthen does not explicitly teach (e) transmitting at least a portion of said response from the user to a server via a network; and (f) storing said response at said server.

Brookler explicitly teaches (e) transmitting at least a portion of said response from the user to a server via a network; and (f) storing said response at said server(Fig.1, para.0033).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright in view of Warthen to include storing user's responses at the server as taught by Brookler in order to provide the predictable result of having all answered survey questions stored on the server.

One ordinary skill in the art would have been motivated to combine the teachings in order to have a central location, e.g. server, for all results of a survey which provides ease of access for the surveyors(Brookler, para.0002).

As per claim 2, the method for managing data of claim 1 further comprising the step of: (g) translating said response to a format recognizable by a particular computer program; and (h) accessing the translated response from a computer executing said particular computer program(Wright, Figs.1-11, Abstract, Brookler, para.0051). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 3, the method for managing data of claim 1 wherein step (a) includes the substeps of: (a)creating a questionnaire by: (i) entering a series of questions into a questionnaire design computer program; (ii) identifying within said questionnaire design computer program the type of response allowed for each question of said series of questions; and (iii) identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions(Wright, Figs.1-11, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 4, the method for managing data of claim 1 wherein step (b) includes the substeps of: (b) tokenizing said questionnaire thereby producing a plurality of tokens representing said questionnaire by: (i) assigning at least one token to each question of said series of questions; (ii) assigning at least one token to each response called for in said series of questions to identify the type of response required; and (iii) assigning at least one token to each branch in said questionnaire to identify the required program control associated with said branch(Wright, Figs.1-11, Abstract, Warthen, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 5, the method of data management of claim 1 wherein the transmission of said tokens in step (c) occurs via the network of step (e) (Brookler, Fig.1). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 6, a method for modifying a questionnaire used in data management according to the method of claim 1 including the steps of:

(a) making at least one incremental change to a portion of the questionnaire;

(b) tokenizing said at least one incremental change to said questionnaire;

(c) transmitting at least a portion of said tokens resulting from step (b) to a remote computing device, said transmitted tokens comprising less than the entire tokenized questionnaire; (d) incorporating said transmitted tokens into said questionnaire at said remote computing device(Wright, Figs.1-11, col.16, lines50-55, Abstract, Warthen, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claims 7, 9-11 rejected for the same reasons as set forth above or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

Claims 8 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,704,029 issued to Wright, Jr.(Wright) in view of US Patent 6,584,464 issued to Warthen in view of US Publication 2002/0007303 issued to Brookler et al.(Brookler) in view of US Publication 2001/0056374 issued to Joao.

As per claim 8, Wright in view of Warthen in view of Brookler does not explicitly teach the method for collecting survey data according to claim 7 further comprising: (f) assessing a charge for each transferred response received by said central computer.

Joao explicitly teaches (f) assessing a charge for each transferred response received by said central computer(para.0230).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright in view of Warthen in view of Brookler to include assessing a charge for each transferred response received by said central computer as taught by Joao in order to receive compensation, a reward, a rebate, and/or an incentive (Joao, para. 0009).

One ordinary skill in the art would have been motivated to combine the teachings in order to facilitate commerce between any parties and/or any number of parties (Joao, para. 0009).

Claims 12-14, 16-18, 24,25, 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,704,029 issued to Wright, Jr.(Wright) in view of US Patent 6,584,464 issued to Warthen in view of US Publication 2002/0007303 issued to Brookler et al.(Brookler) in view of US Patent 6,477,373 issued to Rappaport et al.(Rappaport).

As per claim 12, Wright teaches a method for managing data comprising the steps of: (a) establishing communications between a handheld computing device and an originating computer; (b) receiving within said handheld computing device a transmission of a questionnaire from said originating computer, said questionnaire comprising a plurality of tokens; (d 1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a user, and, (d2) storing within said computing device said at least one response from the user(Fig.1-11, Abstract, col.13, lines 38-65).

Wright however does not explicitly teach tokenizing said questionnaire;(c) ending said communications between said handheld computing device and said originating computer; (d) after said communications has been ended, (e) establishing communications between said handheld computing device and a recipient computer; (f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer.

Wright however does suggest that the questionnaire is tokenized(Figs.1-11, Abstract, col.25, lines 1-50).

Warthen explicitly teaches the known art of tokenizing(Abstract).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright to use the known method of tokenizing as taught by Warthen in order to provide the predictable result of tokenizing a survey.

One ordinary skill in the art would have been motivated to combine the teachings in order to produce electronic surveys and feedback(Wright, Abstract).

Wright in view of Warthen does not explicitly teach ;(c) ending said communications between said handheld computing device and said originating computer; (d) after said communications has been ended, (e) establishing communications between said handheld computing device and a recipient computer; (f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer.

Brookler explicitly teaches (f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer(Fig.1, para.0033).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright in view of Warthen to include transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer as taught by Brookler in order to provide the predictable result of having all answered survey questions stored on the server.

One ordinary skill in the art would have been motivated to combine the teachings in order to have a central location, e.g. server, for all results of a survey which provides ease of access for the surveyors(Brookler, para.0002).

Wright in view of Warthen in view of Brookler does not explicitly teach ;(c) ending said communications between said handheld computing device and said originating computer; (d) after said communications has been ended, (e) establishing communications between said handheld computing device and a recipient computer.

Rappaport explicitly teaches the known art of connection failure and reconnecting of mobile devices(Abstract).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright in view of Warthen in view of Brookler to include the known art of connection failure and reconnecting of mobile devices as

taught by Rappaport in order to provide the predictable result of when connection fails, the mobile device reconnects and sends information once there is a connection.

One ordinary skill in the art would have been motivated to combine the teachings in order to provide reconnection to transfer information to a server.

As per claim 13, the method for managing data according to Claim 12, wherein step (b) comprises the steps of: (b 1) creating a questionnaire, (b2) tokenizing said questionnaire, thereby producing a plurality of tokens representing said questionnaire, (b3) storing said plurality of tokens on a computer readable medium accessible by said originating computer, (b4) accessing said stored plurality of tokens from said originating computer, (b5) transmitting said stored plurality of tokens from said originating computer to said handheld computing device, and, (b6) receiving within said handheld computing device said transmission of said tokenized questionnaire from said originating computer(Wright, Figs.1-11, col.16, lines50-55, Abstract, Warthen, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 14, the method for managing data according to Claim 12, wherein said originating computer and said recipient computer are a same computer(Wright, Figs.1-11, col.16, lines50-55, Abstract, Warthen, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 16, the method for managing data according to Claim 12, wherein said questionnaire comprises at least one question(Wright, Figs.1-11, col.16, lines50-

55, Abstract, Warthen, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 17, the method for managing data according to Claim 16, wherein at least one of said at least one question is selected from a group consisting of a food quality question, a service quality question, a waiting time question, a store number question, a location question, a time question, a date question, a temperature question, and a time of day question(Wright, Figs.1-11, col.16, lines50-55, Abstract, Warthen, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 18, the method for managing data according to Claim 12, wherein step (a) comprises the step of establishing communications via the Internet between said handheld computing device and said originating computer(Wright, Figs.1-11, col.16, lines50-55, Abstract, Warthen, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 24 rejected for the same reasons as set for above, and further (g) after receipt of said transmission of step (f), transmitting a notice of said received value representative of each of said at least one response to a second user(Brookler, para.0033) or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claims 25,28-31 rejected for the same reasons as set forth above or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

Claims 15 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,704,029 issued to Wright, Jr.(Wright) in view of US Patent 6,584,464 issued to Warthen in view of US Publication 2002/0007303 issued to Brookler et al.(Brookler) in view of US Patent 6,477,373 issued to Rappaport et al.(Rappaport) in view of US Publication 2002/0137524 issued to Bade et al.(Bade).

Wright in view of Warthen in view of Brookler in view of Rappaport teaches As per claim 15, the method for managing data according to Claim 12, wherein said step (dl) comprises the steps of: executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a user.

However does not explicitly teach the art of authentication.

Bade explicitly teaches the well known method of authentication(Abstract).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Warthen in view of Brookler in view of Rappaport to include the known method of authentication as taught by Bade in order to provide the predictable result of authentication of a device.

One ordinary skill in the art would have been motivated to combine the teachings in order to provide security for a mobile device and information.

Claims 19-23, 26, 27 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,704,029 issued to Wright, Jr.(Wright) in view of US Patent 6,584,464 issued to Warthen in view of in view of US Patent 6,477,373 issued to Rappaport et al.(Rappaport) in view of US Patent 6,462,708 issued to Tsujimoto et al.(Tsujimoto).

As per claim 19 Wright teaches method for managing data comprising the steps of: (a) establishing communications between a handheld computing device and an originating computer, (b) receiving within said handheld computing device a transmission of a questionnaire, said questionnaire comprising a plurality of tokens; (d l) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to (Figs.1-11, Abstract, col.25, lines 1-50).

Wright does not explicitly teach tokenizing a questionnaire;

(c) ending said communications between said handheld computing device and said originating computer; (d) after said communications has been terminated, (e) establishing communications between said handheld computing device and a recipient computer;

said handheld device having at least a capability to determine a current location thereof; collect at least said current location of said handheld computing device, and, (d2) storing within said handheld computing device said current location; (f) transmitting

at least one value representative of said stored current location to said recipient computer.

Warthen explicitly teaches the known art of tokenizing(Abstract).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright to use the known method of tokenizing as taught by Warthen in order to provide the predictable result of tokenizing a survey.

One ordinary skill in the art would have been motivated to combine the teachings in order to produce electronic surveys and feedback(Wright, Abstract).

Wright in view of Warthen does not explicitly teach

(c) ending said communications between said handheld computing device and said originating computer; (d) after said communications has been terminated, (e) establishing communications between said handheld computing device and a recipient computer;

said handheld device having at least a capability to determine a current location thereof; collect at least said current location of said handheld computing device, and, (d2) storing within said handheld computing device said current location; (f) transmitting at least one value representative of said stored current location to said recipient computer.

Rappaport explicitly teaches the known art of connection failure and reconnecting of mobile devices(Abstract).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright in view of Warthen to include the known art of connection failure and reconnecting of mobile devices as taught by Rappaport in order to provide the predictable result of when connection fails, the mobile device reconnects and sends information once there is a connection.

One ordinary skill in the art would have been motivated to combine the teachings in order to provide reconnection to transfer information to a server.

Wright in view of Warthen in view of Rappaport does not explicitly teach said handheld device having at least a capability to determine a current location thereof; collect at least said current location of said handheld computing device, and, (d2) storing within said handheld computing device said current location; (f) transmitting at least one value representative of said stored current location to said recipient computer.

Tsujimoto explicitly teaches the known system of a mobile device with a GPS to determine location(col.1, lines 17-20).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Wright in view of Warthen in view of Rappaport to include the use of GPS for mobile devices as taught by Tsujimoto in order to provide the predictable result of a determination of a GPS location of a mobile device.

One ordinary skill in the art would have been motivated to combine the teachings in order to determine of a GPS location of a mobile device.

As per claim 20, the method for managing data according to Claim 19 wherein said current location of said handheld computing device is determined using GPS(Tsujimoto, col.1, lines 17-20). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 21, the method for managing data according to Claim 19, wherein said originating computer and said recipient computer are a same computer(Wright, Figs.1-11, col.16, lines50-55, Abstract, Warthen, Abstract). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 22, the method for managing data according to Claim 19, wherein step (d2) comprises the steps of: (i) determining at least one parameter value based on said current location, (ii) storing within said handheld computing device said current location, (iii) storing within said handheld computing device said determined at least one parameter value; and, wherein step (f) comprises the steps of: (fl) transmitting a value representative of said stored current location to said recipient computer, and, (t2) transmitting at least one of said at least one stored parameter value to said recipient computer(Wright, Figs.1-11, col.16, lines50-55, Abstract, Warthen, Abstract, Tsujimoto, col.1, lines 17-20). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claim 23, the method for managing data according to Claim 22, wherein each of said at least one parameter value is selected from a group consisting of a store

number, a store location, a time of day, and a date(Wright, Figs.1-11, col.16, lines50-55, Abstract, Warthen, Abstract, Tsujimoto, col.1, lines 17-20). Motivation to combine set forth in claim 1 and/or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

As per claims 26, 27 rejected for the same reasons as set forth above or Official Notice is taken; the feature is well known and obvious to one ordinary skill in the art.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Lew et al., United States Patent Publication Number 2004/0210472 (hereinafter Lew).

As per claim 1, Lew teaches a method for managing data [see abstract] including the steps of: (a) creating a questionnaire [= survey] comprising a series of questions [paragraphs 0005-0009]; (b) tokenizing said questionnaire [= encrypted survey information, paragraph 0013]; thereby producing a plurality of tokens representing said questionnaire [paragraphs 0005-0009];(c) transmitting said plurality of tokens to a remote computing device [= the survey transmitter may transmit to the remote

responding device in either a wired or a wireless manner, paragraph 0053]; (d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response [= feedback] from a user [= feed back from a user, paragraph 0036]; (e) transmitting at least a portion of said response from the user to a server [= a central facility] via a network [paragraph 0050]; and (f) storing said response at said server [= all feedback is transmitted to the central facility, S6100 of fig.2 and paragraph 0048].

As per claim 5, Lew further teaches wherein the transmission of said tokens in step (c) occurs via the network of step (e) [fig.3].

Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Sendowski et al., United States Patent Publication Number 2003/0198934 (hereinafter Sendowski).

As per claim 7, Sendowski teaches a method for collecting survey data from a user [see abstract] comprising: (a) designing a questionnaire [= survey] having branching logic [= branch script object 124] on a first computer platform [= web server 121] [paragraphs 0023-0028 and 0041-0048]; (b) automatically transferring said designed questionnaire to at least one loosely networked computer [= automatically generate an HTML question page or question form, paragraph 0024-0031]; (c) executing said transferred questionnaire on said loosely networked computer, thereby collecting responses from the user [see abstract]; (d) automatically transferring via the loose network any responses so collected to a central computer [= medical survey

provider 120] [paragraph 0020 and table 3]; and, (e) making available on the Web any responses transferred to said central computer in step (d) [fig.1].

Claim Rejections - 35 USC § 103

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

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

Claims 2-4, 6, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lew as applied in claim 1 above, in view of Sendowski et al., U.S. Patent Application Publication No. 2003/0198934 (hereinafter Sendowski).

As per claim 2, Lew does not explicitly show the step of: (g) translating said response to a format recognizable by a particular computer program; and (h) accessing the translated response from a computer executing said particular computer program.

In a method of managing data, Sendowski discloses the step of: (g) translating said response to a format recognizable [= XML data structural] by a particular computer program [= branching script engine, paragraphs 0007-0008]; and (h) accessing the translated response from a computer executing said particular computer program [paragraphs 0034-0053 and fig.2].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lew in view of Sendowski by accessing a translated response to a format recognizable because this feature provides a framework

of reusable software object implementing the creation and execution of any question-answer branching scripts [Sendowski, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to support thousands of concurrent users when it is required [Sendowski, paragraph 0005].

As per claim 3, Lew does not explicitly show wherein step (a) includes the sub-steps of:(a) creating a questionnaire by: (i) entering a series of questions into a questionnaire design computer program; (ii) identifying within said questionnaire design computer program the type of response allowed for each question of said series of questions; and (iii) identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions.

In a method of managing data, Sendowski discloses wherein step (a) includes the sub-steps of:(a) creating a questionnaire by: (i) entering a series of questions into a questionnaire design computer program [paragraphs 0034-0054]; (ii) identifying within said questionnaire design computer program the type of response allowed for each question of said series of questions [= answer types, paragraph 0019 and table 2]; and (iii) identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions [paragraph 0018 and table 1].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lew in view of Sendowski by identifying within

said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions because this feature provides a framework of reusable software object implementing the creation and execution of any question-answer branching scripts [Sendowski, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to support thousands of concurrent users when it is required [Sendowski, paragraph 0005].

As per claim 4, Lew does not explicitly show wherein step (b) includes the sub-steps of: (b) tokenizing said questionnaire thereby producing a plurality of tokens representing said questionnaire by: (i) assigning at least one token to each question of said series of questions; (ii) assigning at least one token to each response called for in said series of questions to identify the type of response required; and (iii) assigning at least one token to each branch in said questionnaire to identify the required program control associated with said branch.

In a method of managing data, Sendowski discloses wherein step (b) includes the sub-steps of: (b) tokenizing said questionnaire thereby producing a plurality of tokens representing said questionnaire by: (i) assigning at least one token to each question of said series of questions [= a question uses tokens, paragraph 0019]; (ii) assigning at least one token to each response called for in said series of questions to identify the type of response required [= allows the answer to be collected into a name toke, paragraph 0020]; and (iii) assigning at least one token to each branch in said

questionnaire to identify the required program control associated with said branch [paragraphs 0041-0049].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lew in view of Sendowski by assigning at least one token to each question of said series of questions, to each response called for in said series of questions, and to each branch in said questionnaire because this feature provides a framework of reusable software object implementing the creation and execution of any question-answer branching scripts [Sendowski, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to support thousands of concurrent users when it is required [Sendowski, paragraph 0005].

As per claims 6 and 9, Lew teaches a method for managing data transfers between computers [see abstract and fig.1] including the steps of: (a) creating a questionnaire [= survey] at a first site [= modulator 10] in a first computer [= media conveyor 20] located at a second site [paragraphs 0026-0029], said first site and said second site being connected by a network [fig.1]; (b) transmitting said question to a remote computer [= remote responding device] via said network, said remote computer running an OIS [paragraph 0053];

However, Lew does not explicitly show step (c) modifying said questionnaire with incremental changes at a third site in said first computer located at said second site; and step (d) modifying said questionnaire in said remote computer with said incremental changes.

In a method of managing data, Sendowski discloses step (c) modifying said questionnaire with incremental changes at a third site in said first computer located at said second site [= TSLastModified of table 2 and paragraph 0058]; and step (d) modifying said questionnaire in said remote computer with said incremental changes [= TSLastModified of table 2 and paragraph 0058].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lew in view of Sendowski by modifying said questionnaire with incremental changes at a third site in said first computer located at said second site and modifying said questionnaire in said remote computer with said incremental changes because this feature provides a framework of reusable software object implementing the creation and execution of any question-answer branching scripts [Sendowski, see abstract]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to support thousands of concurrent users when it is required [Sendowski, paragraph 0005].

As per claim 10,11 Lew further teaches wherein said first site and said third site are the same [fig.1] and teaches wherein said third site is at said remote computer [fig.1].

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sendowski, as applied in claim 7 above, in view of Joao, U.S. Patent Application Publication No. 2001/0056374 (hereinafter Joao).

As per claim 8, Sendowski does not explicitly show assessing a charge for each transferred response received by said central computer.

In a method for collecting survey data, Joao discloses assessing a charge [i.e. compensation, rewards, rebates and/or incentives can be provided for viewing, reviewing, participating in and/or interacting with, the entire survey, poll and/or questionnaire, paragraph 0230] for each transferred response received by said central computer [paragraphs 0228-0037].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sendowski in view of Joao by assessing a charge for each transferred response received by said central computer because this feature can receive compensation, a reward, a rebate, and/or an incentive [Joao, paragraph 0009]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to facilitate commerce between any parties and/or any number of parties [Joao, paragraph 0009].

Response to Arguments

Applicant's arguments filed 9/16/11 have been fully considered but they are not persuasive.

The applicant has not overcome the Double Patent Rejection, no Terminal Disclaimer was filed.

The applicant has filed a Declaration under 37 CFR 1.131 to try to overcome Lew. However, the Declaration filed on 9/16/11, is deemed to be insufficient.

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Lew reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by

a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897).

The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Lew reference to either a constructive reduction to practice or an actual reduction to practice. It is unclear to what Exhibit B is showing. As on page 2(7) of the Declaration, the applicant states that Exhibit B is a schedule and percentage of time employees spend on programming, however nowhere in Exhibit B does it shows what the applicant contends. It is unclear to what the applicant intends for Exhibit B to show, conception, diligence, or actual/constructive reduction to practice as required.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching of all or part of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BACKHEAN TIV whose telephone number is (571)272-5654. The examiner can normally be reached on M-T 7-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/Backhean Tiv/
Primary Examiner, Art Unit 2451

Notice of References Cited	Application/Control No. 12/910,706	Applicant(s)/Patent Under Reexamination PAYNE, J. DAVID	
	Examiner BACKHEAN TIV	Art Unit 2451	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,555,101 A	09-1996	Larson et al.	358/403
*	B	US-5,704,029 A	12-1997	Wright, Jr., Gerald V.	715/223
*	C	US-5,757,916 A	05-1998	MacDoran et al.	380/258
*	D	US-6,230,142 B1	05-2001	Benigno et al.	705/3
*	E	US-2002/0007303 A1	01-2002	Brookler et al.	705/10
*	F	US-2002/0026338 A1	02-2002	BUKOW, HANS MAX THEODORE	705/7
*	G	US-2002/0087361 A1	07-2002	Benigno et al.	705/3
*	H	US-2002/0137524 A1	09-2002	Bade et al.	455/456
*	I	US-6,462,708 B1	10-2002	Tsujimoto et al.	342/357.43
*	J	US-6,477,373 B1	11-2002	Rappaport et al.	455/436
*	K	US-2002/0194219 A1	12-2002	Bradley et al.	707/506
*	L	US-2003/0022656 A1	01-2003	Hinnant et al.	455/410
*	M	US-6,519,571 B1	02-2003	Guheen et al.	705/14.66

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

NON-PATENT DOCUMENTS

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

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

Unified Patents
Exhibit 1002
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Notice of References Cited	Application/Control No. 12/910,706	Applicant(s)/Patent Under Reexamination PAYNE, J. DAVID	
	Examiner BACKHEAN TIV	Art Unit 2451	Page 2 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,584,464 B1	06-2003	Warthen, David	1/1
*	B	US-6,615,166 B1	09-2003	Guheen et al.	703/27
*	C	US-6,631,184 B1	10-2003	Weiner, Moshe	379/92.01
*	D	US-6,826,726 B2	11-2004	Hsing et al.	715/234
*	E	US-2007/0242809 A1	10-2007	Mousseau et al.	379/088.18
*	F	US-7,310,350 B1	12-2007	Shao et al.	370/466
*	G	US-2008/0098291 A1	04-2008	Bradley et al.	715/223
*	H	US-7,693,283 B2	04-2010	Livesay, Paul Owen	380/255
*	I	US-7,739,658 B2	06-2010	Watson et al.	717/108
*	J	US-2012/0008560 A1	01-2012	Lewis et al.	370/328
*	K	US-2001/0056374	12-2001	Joao, Raymond Anthony	705/14
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L4	367	tokenizer and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 09:17
L5	1	tokenizer near4 question and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 09:18
L6	2	tokenizer with question and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 09:18
L7	2	tokenizer with (question or survey) and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 09:19
L8	68	tokenizer same (question or survey) and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 09:19
L9	0	tokenizer same (question or survey) same feedback and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 09:20
L10	56	tokenizer same (question or survey) and feedback and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 09:20
L12	6	(("5704029") or ("6584464") or ("20020007303")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/09/16 09:45
L13	2	l12 and updat$4	US-PGPUB; USPAT;	OR	ON	2012/09/16

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			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
L14	0	("20010056837").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/09/16 10:06
L15	0	("200100568374").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/09/16 10:07
L16	2	("20010056374").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/09/16 10:07
L17	1	charg$4 near4 response with survey and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:09
L18	5	(charg$4 or fee) near4 response with survey and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:09
L19	14	(charg$4 or fee) with response with survey and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:11
L20	0	mobile near3 re$connect near4 server and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:50
L21	1	mobile with re$connect near4 server and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:50
L22	18	mobile with re$connect$4 near4 server and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:50
L23	0	mobile with re$connect$4 near4 server same GPS and	US-PGPUB; USPAT;	OR	ON	2012/09/16 10:50

Unified Patents
Exhibit 1002

		(@ad<="20010831" or @rlad<="20010831")	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
L24	1	mobile with re$connect$4 near4 server and GPS and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:51
L25	1	mobile with re$connect$4 with server and GPS and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:51
L26	44	mobile with re$connect$4 and GPS and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:52
L27	10	mobile with re$connect$4 and connection with (fail$4 or un$available) and GPS and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:53
L28	53	mobile with re$connect$4 and connection with (fail$4 or un$available) and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 10:55
L29	24237412	authenticate near3 mobile (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 11:07
L30	663	authenticate near3 mobile and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 11:08
L31	2	authenticate near3 mobile same GPS and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 11:09
L32	33	send$4 near4 GPS near4 location with server and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/16 11:18
S1	2	("20040210472").PN.	US-PGPUB; USPAT;	OR	OFF	2012/09/15 15:56

Unified Patents
Exhibit 1002

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S2	2	("20030198934").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/09/15 15:57
S3	643	creat$4 near4 (survey or questionnaire) and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/15 16:18
S4	33	creat$4 near4 (survey or questionnaire) same feedback and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/15 16:18
S5	0	creat$4 near4 (survey or questionnaire) with token$4 and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/15 16:20
S6	0	creat$4 near4 (survey or questionnaire) same token$4 and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/15 16:20
S7	23	creat$4 near4 (survey or questionnaire) and token$4 and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/15 16:20
S8	9	creat$4 near4 (survey or questionnaire) same mobile and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/15 16:29
S9	242	creat$4 near4 (survey or questionnaire or form) same mobile and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/15 16:31
S10	19	creat$4 near4 (survey or questionnaire or form) same mobile and (download$4 or upload$4) near4 (survey or questionnaire or form) and (@ad<="20010831" or @rlad<="20010831")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/15 16:32
S11	2	("5555101").PN.	US-PGPUB;	OR	OFF	2012/09/15

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			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			16:33
S12	4	(("6826726") or ("7739658")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/09/15 16:37

EAST Search History (Interference)

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9/ 16/ 2012 11:50:27 AM
C:\ Users\ btiv\ Documents\ EAST\ Workspaces\ 12910706_creating_survey_feedback_mobile.wsp

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12910706	PAYNE, J. DAVID
	Examiner	**Art Unit**
	BACKHEAN TIV	2451

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

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

CLAIM		DATE								
Final	Original	03/09/2011	09/16/2012							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
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	30		✓							
	31		✓							

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PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12910706
Filing Date	2010-10-22
First Named Inventor	Payne
Art Unit	2451
Examiner Name	Nghi V. Tran
Attorney Docket Number	71835/10-351

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6826726		2004-11-30	HSING, ET AL.	
	2	7739658		2010-06-15	WATSON, ET AL.	

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Unified Patents
Exhibit 1002
Page 181 of 2584

Receipt date: 09/21/2011	Application Number	12910706 12910706 - GAU: 2451
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Filing Date	2010-10-22
	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	Nghi V. Tran
	Attorney Docket Number	71835/10-351

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	"dcLINK The Total Solution", 08/1999, Publisher: Internet printout, Published in: US	☐
	2	DSI Internet Printout entitled "Marketing Collateral," dated 02/24/2002, Publisher: Internet Printout, Published in: US	☐
	3	2002 DSI Press Releases dated 4/08/2002 , Publisher: Internet	☐

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EXAMINER SIGNATURE

Examiner Signature	/Backhean Tiv/ (09/15/2012)	Date Considered	09/15/2012

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

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

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Receipt date: 09/21/2011	Application Number	12910706 12910706 - GAU: 2451
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Filing Date	2010-10-22
	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	Nghi V. Tran
	Attorney Docket Number	71835/10-351

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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

OR

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

☐ See attached certification statement.

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

☐ None

SIGNATURE

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

Signature	/scott r. zingerman/	Date (YYYY-MM-DD)	2011-09-21
Name/Print	Zingerman, Scott R.	Registration Number	35422

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

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

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12910706	PAYNE, J. DAVID
	Examiner	Art Unit
	BACKHEAN TIV	2451

SEARCHED			
Class	Subclass	Date	Examiner
709	203	03/09/2011	NT
709	223	03/09/2011	NT
709	224	03/09/2011	NT

SEARCH NOTES		
Search Notes	Date	Examiner
Keyword search using EAST	03/09/2011	NT
UPDATE SEARCH	9/16/2012	BT

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

	/BACKHEAN TIV/ Primary Examiner.Art Unit 2451

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/910,706	10/22/2010	J. David Payne	71855/10-351	8703

22206 7590 11/16/2012

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BAILEY & TIPPENS
THE KENNEDY BUILDING
321 SOUTH BOSTON SUITE 800
TULSA, OK 74103-3318

EXAMINER	
TIV, BACKHEAN	
ART UNIT	PAPER NUMBER
2451	

MAIL DATE	DELIVERY MODE
11/16/2012	PAPER

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

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

Applicant-Initiated Interview Summary	Application No.	Applicant(s)	
	12/910,706	PAYNE, J. DAVID	
	Examiner	Art Unit	
	BACKHEAN TIV	2451	

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

(1) *BACKHEAN TIV*.

(2) *SCOTT ZINGERMAN(35422)*.

(3) *TERRY WATT(42214)*.

(4) *JAMES MCGILL*.

Date of Interview: *11/15/12*.

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

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

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

Claim(s) discussed: *ALL*.

Identification of prior art discussed: *PRIOR ART OF RECORD*.

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

THE APPLICANT DESCRIBED THE INVENTION AS IT RELATES TO DATA COLLECTION FOR MOBILE DEVICES, IN WHICH A SERVER HAVING "A PROGRAM"(QUESTIONNAIRE) WHICH IS DEVICE INDEPENDENT IS SENT TO USERS OF A MOBILE DEVICE AND A SERIES OF QUESTIONS ARE ASKED OF THE CLIENT. THIS INFORMATION FIRST STORED ON THE DEVICE AND THEN CONNECTS TO THE SERVER FOR TRANSMISSION AND STORAGE. THE APPLICANT ALSO DESCRIBED THAT BEFORE THE INFORMATION OF THE QUESTIONNAIRE IS DELETED THAT THERE IS A VERIFICATION PROCESS OF WHETHER THE DATA WAS SUCESSFULLY RECEIVED BY THE SERVER. DISCUSSED WHETHER,THE SPECIFICATION SUPPORTS THE LIMITATION OF "ENDING COMMUNICATION", THE APPLICANT POINTS TO THE PROVISIONAL APPLICATION, APPENDIX 3(PAGE 26) STEP 4, WHERE A REMOTE USER LOGINS AND THAT IT'S INHERENT THAT THIS IS AN ACTIVE "DISCONNECT"/"ENDING OF COMMUNICATION" THROUGH THE USE OF LOGOUT. THE APPLICANT FURTHER DESCRIBES TOKENIZATION/TOKENS AS HAVING SEVERAL SPECIAL MEANING, E.G. LOGICAL, MATHMATICAL OR BRANCHING OPERATION. DISCUSS EVIDENCE SUBMISSION TO SHOW DUE DILIGENCE. THE APPLICANT IS ADVISED TO CLARIFY THE RECORD TO WHICH WAY THE APPLICANT IS TRYING TO SHOW PRIORITY OF THE INVENTION UNDER 131, ACTUAL REDUCTION TO PRATICE OR CONSTRUCTIVE REDUCTION TO PRATICE. THE APPLICANT INTENDS TO FILE TERMINAL DISCLAIMER. ALL ARGUMENTS AND/OR EVIDENCE SHOULD BE FORMALLY SUBMITTED WITH SPECIFIC LOCATION FOR SUPPORT FOR ANY AMENDMENTS MADE. THE EXAMINER WILL RE-CONSIDER THE ART AND APPLICANT'S ARGUMENT. NO AGREEMENT WAS REACHED .

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

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

☐ Attachment

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/Backhean Tiv/ Primary Examiner, Art Unit 2451	

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Summary of Record of Interview Requirements

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

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

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

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

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

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

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

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

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

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

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

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

Examiner to Check for Accuracy

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

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Payne	Confirmation No.: 8703
Application No.: 12/910,706	Art Unit: 2451
Filed: 10/22/2010	Examiner: BACKHEAN TIV
Title: SYSTEM AND METHOD FOR DATA MANAGEMENT	
Attorney Docket No.: 71855/10-351	

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

AMENDMENT AND RESPONSE

This paper is filed in response to the Office Action mailed September 20, 2012. Please consider the instant filing to be a Petition for a One Month Extension of Time to Respond. A charge to a credit card will be authorized through EFS Web filing. If any additional fee is required by virtue of the filing of this paper, please also consider this a general authorization to charge Deposit Account No. 06-0540 for the same. Please amend the application as follows:

In the claims:

This listing of claims will replace all prior versions and listings of the claims in this application.

1. (*Previously Presented*) A method for managing data including the steps of:

(a) creating a questionnaire comprising a series of questions;

(b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire;

(c) transmitting said plurality of tokens to a remote computing device;

(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response from a user;

(e) transmitting at least a portion of said response from the user to a server via a network; and

(f) storing said response at said server.

2. (*Previously Presented*) The method for managing data of claim 1 further comprising the step of:

(g) translating said response to a format recognizable by a particular computer program; and

(h) accessing the translated response from a computer executing said particular computer program.

3. (*Previously Presented*) The method for managing data of claim 1 wherein step (a) includes the substeps of:

(a) creating a questionnaire by:

(i) entering a series of questions into a questionnaire design computer program;

(ii) identifying within said questionnaire design computer program the type of response allowed for each question of said series of questions; and

(iii) identifying within said questionnaire design computer program a branching path in said questionnaire for each possible response to each question of said series of questions.

4. (*Previously Presented*) The method for managing data of claim 1 wherein step (b) includes the substeps of:

(b) tokenizing said questionnaire thereby producing a plurality of tokens representing said questionnaire by:

(i) assigning at least one token to each question of said series of questions;

(ii) assigning at least one token to each response called for in said series of questions to identify the type of response required; and

(iii) assigning at least one token to each branch in said questionnaire to identify the required program control associated with said branch.

5. (*Previously Presented*) The method of data management of claim 1 wherein the transmission of said tokens in step (c) occurs via the network of step (e).

6. (*Previously Presented*) A method for modifying a questionnaire used in data management according to the method of claim 1 including the steps of:

(a) making at least one incremental change to a portion of the questionnaire;

(b) tokenizing said at least one incremental change to said questionnaire;

(c) transmitting at least a portion of said tokens resulting from step (b) to a remote computing device, said transmitted tokens comprising less than the entire tokenized questionnaire;

(d) incorporating said transmitted tokens into said questionnaire at said remote computing device.

7. (*Currently Amended*) A method for collecting survey data from a user and making responses available on the Web, comprising:

(a) designing a questionnaire having branching logic on a first computer platform;

(b) automatically transferring said designed questionnaire to at least one loosely networked computer;

(c) executing said transferred questionnaire on said loosely networked computer, thereby collecting responses from the user;

(d) automatically transferring via the loose network any responses so collected to a central computer; and,

(e) making available on the Web any responses transferred to said central computer in step (d).

8. (*Previously Presented*) The method for collecting survey data according to claim 7 further comprising:

(f) assessing a charge for each transferred response received by said central computer.

9. (*Currently Amended*) A method for managing data transfers between computers including the steps of:

(a) creating a questionnaire at a first [[site]] location in a first computer located at a second [[site]] location, said first [[site]] location and said second [[site]] location being connected by a network; tokenizing said questionnaire;

(b) transmitting said tokenized questionnaire to a remote computer via said network, said remote computer running an OIS;

(c) modifying said questionnaire with incremental changes at a third [[site]] location in said first computer located at said second [[site]] location; tokenizing said incremental changes;

(d) transmitting said tokenized incremental changes from said first computer to said remote computer via said network; and,

(e) modifying said questionnaire in said remote computer with said incremental changes.

10. (*Currently Amended*) The method for managing data transfers between computers according to claim 9 wherein said first [[site]] location and said third [[site]] location are the same.

11. (*Currently Amended*) The method for managing data transfers between computers according to claim 9 wherein said third [[site]] location is at said remote computer.

12. (*Previously Presented*) A method for managing data comprising the steps of:

(a) establishing communications between a handheld computing device and an originating computer;

(b) receiving within said handheld computing device a transmission of a tokenized questionnaire from said originating computer, said tokenized questionnaire comprising a plurality of tokens;

(c) ending said communications between said handheld computing device and said originating computer;

(d) after said communications has been ended,

(d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a user, and,

(d2) storing within said computing device said at least one response from the user;

(e) establishing communications between said handheld computing device and a recipient computer; and,

(f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer.

13. (*Previously Presented*) The method for managing data according to Claim 12, wherein step (b) comprises the steps of:

(b1) creating a questionnaire,

(b2) tokenizing said questionnaire, thereby producing a plurality of tokens representing said questionnaire,

(b3) storing said plurality of tokens on a computer readable medium accessible by said originating computer,

(b4) accessing said stored plurality of tokens from said originating computer,

(b5) transmitting said stored plurality of tokens from said originating computer to said handheld computing device, and,

(b6) receiving within said handheld computing device said transmission of said tokenized questionnaire from said originating computer

14. (*Previously Presented*) The method for managing data according to Claim 12, wherein said originating computer and said recipient computer are a same computer.

15. (*Previously Presented*) The method for managing data according to Claim 12, wherein said step (d1) comprises the steps of:

(i) requiring a user to authenticate with said handheld computing device,

(ii) only if the user is able to authenticate with said handheld computing device, executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a user, and,

(iii) if the user is unable to authenticate with said handheld computing device, taking no further action.

16. (*Previously Presented*) The method for managing data according to Claim 12, wherein said questionnaire comprises at least one question.

17. (*Previously Presented*) The method for managing data according to Claim 16, wherein at least one of said at least one question is selected from a group consisting of a food quality question, a service quality question, a waiting time question, a store number question, a location question, a time question, a date question, a temperature question, and a time of day question.

18. (*Currently Amended*) The method for managing data according to Claim 12, wherein step (a) comprises the step of establishing communications via ~~the Internet~~ a global

computer network between said handheld computing device and said originating computer.

19. (*Previously Presented*) A method for managing data comprising the steps of:

(a) establishing communications between a handheld computing device and an originating computer, said handheld device having at least a capability to determine a current location thereof;

(b) receiving within said handheld computing device a transmission of a tokenized questionnaire, said tokenized questionnaire comprising a plurality of tokens;

(c) ending said communications between said handheld computing device and said originating computer;

(d) after said communications has been terminated,

(d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least said current location of said handheld computing device, and,

(d2) storing within said handheld computing device said current location;

(e) establishing communications between said handheld computing device and a recipient computer; and,

(f) transmitting at least one value representative of said stored current location to said recipient computer.

20. (*Previously Presented*) The method for managing data according to Claim 19 wherein said current location of said handheld computing device is determined using GPS.

21. (*Previously Presented*) The method for managing data according to Claim 19, wherein said originating computer and said recipient computer are a same computer.

22. (*Canceled*)

23. (*Canceled*)

24. (*Previously Presented*) A method for managing data comprising the steps of:

(a) establishing communications between a handheld computing device and an originating computer;

(b) receiving within said handheld computing device a transmission of a tokenized questionnaire from said originating computer, said tokenized questionnaire comprising a plurality of tokens;

(c) ending said communications between said handheld computing device and said originating computer;

(d) after said communications has been ended,

(d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one response from a first user, and,

(d2) storing within said computing device said at least one response from the first user;

(e) establishing communications between said handheld computing device and a recipient computer;

(f) transmitting a value representative of each of said at least one response stored within said handheld computing device to said recipient computer; and,

(g) after receipt of said transmission of step (f), transmitting a notice of said received value representative of each of said at least one response to a second user.

25. (*Previously Presented*) The method for managing data according to Claim 24, wherein the first user and the second user are a same user.

26. (*Currently Amended*) A method for managing data comprising the steps of:

(a) within a central computer, accessing at least one user data item stored in a recipient computer, wherein said at least one data item is obtained via the steps of:

(1) establishing communications between a handheld computing device and an originating computer;

(2) receiving within said handheld computing device a transmission of a tokenized questionnaire, said tokenized questionnaire comprising a plurality of tokens;

(3) ending said communications between said handheld computing device and said originating computer;

(4) after said communications has been ended,

(i) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device,

(ii) presenting said at least one question to a user;

(iii) receiving at least one response from the user to each of said presented at least one question,

(iv) storing at least one value representative of said at least one response within said handheld computing device;

(5) establishing a communications link between said handheld computing device and a recipient computer;

(6) transmitting said stored at least one value representative of said at least one response stored within said handheld computing device to said recipient computer; and,

(7) storing within said recipient computer any of said transmitted at least one value representative of said at least one response, thereby creating said at least one user data item stored in said recipient computer; and,

(b) forming a visually perceptible report from any of said at least one stored user data item ~~so accessed~~.

27. (*Previously Presented*) The method according to Claim 26, wherein said central computer and said recipient computer are a same computer.

28. (*Previously Presented*) A method for managing data comprising the steps of:

(a) establishing communications between a handheld computing device and an originating computer;

(b) receiving within said handheld computing device a transmission of a tokenized questionnaire, said tokenized questionnaire comprising a plurality of tokens;

(c) ending said communications between said handheld computing device and said originating computer;

(d) after said communications have been ended,

(d1) executing at least a portion of said plurality of tokens comprising said questionnaire on said handheld computing device to collect at least one item of data, and,

(d2) storing within said handheld computing device said at least one item of data;

(e) establishing communications between said handheld computing device and a recipient computer; and,

(f) transmitting at least one value representative of said at least one item of data to said recipient computer.

29. (*Previously Presented*) A method for managing data according to Claim 28, wherein at least one of said at least one item of data is selected from a group consisting of a GPS location, a temperature, an event timing, a current date, a current time, a user

authentication information, an item of text, a numeric item, a time stamp, a user response, and, a user response to a question.

30. (*Previously Presented*) A method for managing data according to Claim 28, wherein said established communications between said handheld computing device and said originating computer is established using the Internet.

31. (*Previously Presented*) A method for managing data according to Claim 28, wherein said originating computer and said recipient computer are a same computer.

REMARKS

Claims 1-31 are pending in the application. Claims 1-31 stand as rejected in the Office Action. By way of this Amendment and Response, claims 7, 9, 10, 11, 18 and 26 are amended. Claims 22 and 23 are canceled without prejudice. Reconsideration and allowance of claims 1-21 and 24-31 is respectfully requested.

Double Patenting

In the Office Action, claims 1-31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 7,822,816. Pursuant to 37 C.F.R. 1.321, Applicants herewith submit a terminal disclaimer. Accordingly, the double patenting rejection in the Office Action is overcome. Reconsideration and allowance of claims 1-31 is respectfully requested.

Claim Rejections - 35 USC § 112

Claims 12-31 are rejected in the Office Action under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Reconsideration and allowance of claims 12-31 is respectfully requested.

Claims 12-31 stand as rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. It is said that these claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor at the time the application was filed had possession of the claimed invention. It is further said that the Applicant has provided support in the specification for claims 12-31, but that those paragraphs do not teach at least the limitation of, "ending said

communication between said handheld computing device and said originating computer". It is further said that the passage relied upon by the Applicant only describes that the network connectivity is unavailable. It is said that this does not describe the step of "ending of communication", and after the communication has ended to perform the step of (d1). Finally, the Examiner states that any communication or network connection being unavailable are different as any communication is an "active step" whereas having a network connection being unavailable is merely a state of the connection.

In reply, and as an initial matter, the Examiner apparently accepts that Applicant's step of "establishing communications", which is undeniably an "active step", is fully supported in the application. In Examiner's view, the specification does not reasonably convey that instant inventor contemplated an active disconnection from an available network. However, acceptance of that premise leads to the inevitable conclusion (*reductio ad absurdum)* that the inventor intended that the invention would establish a connection to a remote server (an active step) and then *never* actively terminate that connection but, instead, rely on the failure of the network to perform that function. That view is obviously misplaced.

In brief, Applicant believes that the step of "ending the connection" is inherent in the instant disclosure.

By way of support, Applicant would first direct the Examiner's attention to Appendix 3 (pg. 26), step 4 of the Provisional Application to which this application claims priority (USSN 60/404,491). Attention is specifically directed to the following passage from this reference:

> 4. A remote user, upon successful login, receives a set of small cryptic instructions transferred to the PDA.

As was discussed with the Examiner during the teleconference of November 15, 2012, Applicant believes that this passage clearly supports the claim language "establishing communications" of claim step 12(a), and the Examiner has not challenged this. However, those of ordinary skill in the art would immediately recognize that a statement that teaches the step of "login" would inherently teach an ability to "logout", an active step.

Attention is further directed to pg. 24 of the same Appendix wherein under the heading "Preferred Feature List" it is indicated that "user authentication based on encrypted user name and password" is a feature of the instant invention. Once again, applicant believes it is inherent that if a login is provided that a logout would also be provided and such logout would in fact be precisely the "active step" which occurs while the network connection is still available.

Finally, consider the definition of "log in" from the 1994 edition of the "IBM Dictionary of Computing", attached herewith as Exhibit C:

> **log in** ... (2) To begin a session with a remote resource.

Id. At page 401 (underlining added). The definition of "session" from that same reference is as follows:

> **session** (1) In network architecture, for the purpose of data communication between functional units, all the activities which take place during the establishment, maintenance, and release of the connection.

Id. At p. 615.

Thus, based on standard industry definitions that were in use from a time before the instant application was filed, the act of logging in begins a session that inherently contemplates there will ultimately be a release of the connection, an active step.

As such, it is believed that Applicant's reference to "login" inherently contemplates an active release of the connection, an operation that is distinct from a disconnection caused by the unavailability of the network. Thus, it is believed that the claim language "ending said communications between said handheld computing device and said originating computer" is fully and inherently supported by at least the reference to a "login" in the instant provisional application.

In view of the foregoing it is believe the instant rejection under §112 is improper and the claims rejected on this basis should be allowed to issue.

Claim 15 has been rejected in the Office Action in that it recites the steps of "authenticate with said handheld computing device...(ii) only if the user is able to authenticate...(iiii) if the user is unable to authenticate" wherein reference is made to ¶[0084] which describes "optional authentication of users". Applicant further cites to the Provisional Application (USSN 60/404,491), Appendix 2 (pg. 24) which additionally recites "[u]ser authentication based on encrypted user name and password." Additionally, Appendix 3 of the Provisional Application recites "4. A remote user, upon successfully login, receives a set of small cryptic instructions transferred to the PDA." Accordingly, the Applicant's disclosure recites that the user authenticates with a user name and password and upon successful login receives a small set of instructions. Applicant submits that a person having ordinary skill in the art would readily understand that if login is unsuccessful (the user is unable to authenticate with the handheld computing device) that no further action would be taken. Accordingly, Applicant submits that support for the recitation of claim 15 can be found in Applicant's disclosure. Reconsideration and allowance of claim 15 is respectfully requested.

The Office Action further rejects claim 22 in that it recites the steps of "determining at least one parameter value based on said current location". The Office Action cites to ¶[0070] which describes "handheld computer is equipped with GPS receiver." Applicant has canceled claims 22 and 23 without prejudice by way of this Amendment and Response. Accordingly, the rejection of claim 22 is moot.

Claims 7-11, 18, 26 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In light of the above amendments, reconsideration of claims 7-11, 18, and 26 is respectfully requested.

Claims 7 and 8 are rejected as reciting "making available on **the Web**" as lacking sufficient antecedent basis for this limitation in the claim. Claim **7** has been amended to recite "[a] method for collecting survey data from a user and making responses available on the Web, comprising". Accordingly, sufficient antecedent basis is provided for the term "the Web" in claims 7 and 8.

Claims 9-11 are rejected as reciting the term "site" which it is asserted in the Office Action to be unclear and indefinite. Applicant has replaced the term "site" with the term "location". Applicant's amendment to claims 9-11 makes it clear that the word "site" recited therein refers to a location and not a website.

With regard to claim 18 which is rejected in the Office Action for reciting "the Internet", Applicant has replaced the term "the Internet" with "a global computer network." Support for this amendment can be found in Applicant's ¶[0076] and elsewhere.

Claim 26 has been rejected in the Office Action as reciting "(b) forming a visually … user data item so accessed". Claim 26 has been amended herein to delete the term "so accessed."

In light of the above-identified amendments to claims 7-11, 18, and 26, the rejection in the Office Action under 35 U.S.C. §112, second paragraph, is overcome. Reconsideration and allowance of claims 7-11, 18, and 26 is respectfully requested.

Claim Rejections - 35 USC § 103

Claims 1-7, 9-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,704,029 issued to Wright, Jr. (hereinafter the "Wright Reference") in view of U.S. Patent 6,584,464 issued to Warthen (hereinafter the "Warthen Reference") in view of U.S. Publication 2002/0007303 issued to Brookler, et al. (hereinafter the "Brookler Reference"). Reconsideration of claims 1-7, and 9-11 is respectfully requested.

Applicant's claim 1 recites "(b) tokenizing said questionnaire; thereby producing a plurality of tokens representing said questionnaire." Claim 9 has been amended herein to recite "(a) creating a tokenized questionnaire at a first location at a first computer located at a second location."

Applicant agrees with the Office Action in that Wright does not explicitly teach tokenizing a questionnaire. Applicant disagrees however, with the Office Action and submits that Wright does not even suggest that the questionnaire is tokenized.

The Office Action, however, asserts that the Warthen Reference explicitly teaches "the known art of tokenizing (Abstract)". Applicant respectfully disagrees. Although the Warthen References uses the word "tokenizing" (abstract and elsewhere), this term is used in a substantially different manner than in Applicant's claim 1 and 9.

With regard to the Warthen Reference, column 5, lines 28-30 read "Tokenizer **150** converts the initial user query into a list of words and provides the list to parser **155**." Then in the abstract Warthen reads:

> In some systems, the question processor includes a tokenizer for tokenizing the initial user query into a list of words, a parser for generating a syntactic structure from the list of words, a normalizer for reducing the syntactic structure to a canonical syntactic structure, and a matcher for matching the canonical syntactic structure against a semantic network to obtain a weighted list of well-formed questions representative of possible semantic meanings for the initial user query.

Thus in the Warthen Reference, the term "tokenizing" merely means to take a search query which has been entered into a computer program and convert it into a list of words. That is all that the Warthen Reference teaches regarding tokenizing. A syntactic structure is derived from the list of words which is in turn reformed into canonical forms by replacing synonyms with a canonical term (Col. 5, lines 45-47). The canonical structure is then matched against a semantic network to obtain well-formed questions which are representative of the possible meanings for the initial user query.

In contrast, tokenizing is much different pursuant to Applicant's disclosure and specifically ¶¶[0054] and [0055] which reads:

> **[0054]** As the client creates a list of questions, symbols from a tool bar may be used to control conditional branching based on the user's response. As the client enters questions and selects response types, server **24** builds a stack of questions and responses, and assigns indices, or tokens, which point to each question or response. Each token preferably corresponds to a logical, mathematical, or branching operation and is preferably selected and made a part of the questionnaire through a graphical user interface. By this mechanism, a user is able to create a series of questions, the precise nature of which is dependent on the user's

> responses. For example, the questionnaire designer might desire to create a form that asks the user different questions; depending on whether the user was male or female. In order to do this, the designer would enter the questions ("Are you a man or woman?"); select a response (a "pop up" list of two entries male and female); select a token (branch if "male"); assign that token to this question; and, specify an "end" location for the "branch" (i.e., the first question asked of "males").
>
> **[0055]** When the questionnaire **40** is complete, server **24** sends the stack of questions and defined responses to the appropriate handheld devices, as represented by handheld **28**, via the loosely networked connection **34**. In addition, server **24** sends the operating logic for that questionnaire, which is simply a list of tokens which point to the questions and responses to each question as well as tokens for program control or math operations. As will be apparent to those skilled in the art, if a question or response is repeated within the questionnaire, only a pointer need be repeated in the program list, not the entire question.

Thus, pursuant to Applicant's claims 1 and 9, a plurality of tokens are transmitted to the remote computing device and at least a portion of them are executed. Those tokens are executed by the remote device to create a questionnaire. A token of Applicant's claims 1 and 9 is not a list of words as defined by the Warthen Reference. As a result the Warthen Reference does not teach tokenizing as recited in Applicant's claims 1 and 9.

Additionally, and significantly, claim 1 recites "(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device…" As stated above, at least a portion of the tokens are commands instructions and those instructions are executed by the remote computer. Neither the Wright Reference, Warthen Reference, nor the Brookler Reference teach or suggest executing the tokens at the remote computer.

In sum it would not have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to modify the Wright Reference with the Warthen and Brookler

References as asserted in the Office Action to arrive at the method of Applicant's claims 1 and 9. As a result the rejection in the Office Action of claims 1 and 9 under 35 U.S.C. §103(a) is overcome. Reconsideration and allowance of claims 1 and 9 is respectfully requested.

Claims 2-7 depend from claim 9 and are allowable at least for the reasons set forth with regard to claim 1. Reconsideration and allowance of claims 2-7 is respectfully requested.

Claims 10-11 depend from claim 9 and are allowable at least for the reasons set forth above with regard to claim 9. Reconsideration and allowance of claims 10-11 is respectfully requested.

Claim 8 is rejected in the Office Action under 35 U.S.C. §103(a) as being unpatentable over the Wright Reference in view of the Warthen Reference, in view of the Brookler Reference in view of U.S. Publication 2001/0056374 issued to Joao (hereinafter the "Joao Reference"). Claim 8 depends from claim 1 and is allowable at least for the reasons set forth above with regard to claim 1. Reconsideration and allowance of claim 8 is respectfully requested.

Claims 12-14, 16-18, 24, 25, 28-31 are rejected in the Office Action under 35 U.S.C. §103(a) as being unpatentable over the Wright Reference, in view of the Warthen Reference, in view of the Brookler Reference, in view of U.S. Patent 6,477,373 issued to Rappaport et al. (the "Rappaport Reference"). Reconsideration of claims 12-14, 16-18, 24, 25, and 28-31 is respectfully requested.

Applicant's claims 12, 24 and 28 recite "receiving within said handheld computing device a transmission of a tokenized questionnaire". Applicant incorporates herein by reference the remarks set forth above with regard to claims 1 and 9. Specifically, as set forth above, neither the Wright Reference, the Warthen Reference, nor the Brookler Reference teach or

suggest tokenizing. Moreover, the Rappaport Reference also does not teach tokenizing as set forth in Applicant's claims 12, 24 and 28. As a result, and for the reasons set forth above, the rejection of claims 12, 24 and 28 under 35 U.S.C. §103(a) is overcome. Reconsideration and allowance of claims 12, 24 and 28 is respectfully requested.

Claims 29-31 depend from claim 28 and are allowable at least for the reasons set forth above with regard to claim 28. Reconsideration and allowance of claims 29-31 is respectfully requested.

Claims 13, 14, and 16-18 depend from claim 12 and are allowable at least for the reasons set forth above with regard to claim 12. Reconsideration and allowance of claims 13, 14, and 16-18 is respectfully requested.

Claim 25 depends from claim 24 and is allowable at least for the reasons set forth above with regard to claim 24. Reconsideration and allowance of claim 25 is respectfully requested.

Claim 15 is rejected in the Office Action under 35 U.S.C. §103(a) as being unpatentable over the Wright Reference, in view of the Warthen Reference, in view of the Brookler Reference, in view of the Rappaport Reference, in view of U.S. Publication 2002/0137524 issued to Bade, et al. (hereinafter the "Bade Reference"). Claim 15 depends from claim 12 and is allowable at least for the reasons set forth above with regard to claim 15. Reconsideration and allowance of claim 15 is respectfully requested.

Claims 19-23, 26, and 27 are rejected in the Office Action under 35 U.S.C. §103(a) as being unpatentable over the Wright Reference, in view of the Warthen Reference, in view of the Rappaport Reference, in view of U.S. Patent 6,462,708 issued to Tsujimoto, et al. (hereinafter the "Tsujimoto Reference"). Reconsideration of claims 19-23, 26, and 27 is respectfully requested.

Applicant's claims 19 and 26 recite "receiving within said handheld computing device a transmission of a tokenized questionnaire". Applicant incorporates herein by reference the remarks set forth above with regard to claims 1 and 9. Specifically, as set forth above neither the Wright Reference, the Warthen Reference, the Brookler Reference, nor the Rappaport Reference teach or suggest tokenizing. Moreover, the Tsujimoto Reference also does not teach tokenizing as set forth in Applicant's claims 19 and 26. As a result, and for the reasons set forth above, the rejection of claims 19 and 26 under 35 U.S.C. §103(a) is overcome. Reconsideration and allowance of claims 19 and 26 is respectfully requested.

Claims 20-21 depend from claim 19 and are allowable at least for the reasons set forth above with regard to claim 19. Claims 22 and 23 have been canceled herein. Reconsideration and allowance of claims 20 and 21 is respectfully requested.

Claim 27 depends from claim 26 and is allowable at least for the reasons set forth above with regard to claim 26. Reconsideration and allowance of claim 27 is respectfully requested.

Claim Rejections - 35 USC § 102

Claims 1 and 5 are rejected in the Office Action under 35 U.S.C. §102(e) as being anticipated by Lew, et al., U.S. Publication No. 2004/0210472 (hereinafter the "Lew Reference").

It is said on page 22 of the Office Action that, with respect to Claim 1, the Lew Reference teaches a method for managing data that includes the steps of:

(a) creating a questionnaire [= survey] comprising a series of questions [paragraphs 0005-0009];

(b) tokenizing said questionnaire [= encrypted survey information, paragraph 0013]; thereby producing a plurality of tokens representing said questionnaire [paragraphs 0005-0009];

(c) transmitting said plurality of tokens to a remote computing device [= the survey transmitter may transmit to the remote responding device in either a wired or a wireless manner, paragraph 0053];

(d) executing at least a portion of said plurality of tokens representing said questionnaire at said remote computing device to collect a response [= feedback] from a user [= feed back from a user, paragraph 0036];

(e) transmitting at least a portion of said response from the user to a server [= a central facility] via a network [paragraph 0050]; and

(f) storing said response at said server [= all feedback is transmitted to the central facility, S6100 of Fig. 2 and paragraph 0048].

With respect to claim 5, it is said that Lew further teaches wherein the transmission of said tokens in step (c) occurs via the network of step (e).

Applicant respectfully disagrees that claims 1 and 5 of the instant application are anticipated by the Lew Reference. Specifically, Applicant believes that the Lew Reference fails to teach or suggest at least Applicant's steps of tokenizing said questionnaire and/or executing at least a portion of the plurality of tokens to collect a response from a user.

However, assuming only for purposes of argument that the Lew Reference does indeed teach or suggest each and every step of Applicant's claimed invention as set out in claim **1**, Applicant has previously offered, pursuant to 37 C.F.R. §1.131, the Inventor's Declaration that

was attached to the Amendment and Response dated September 16, 2011 as Exhibit A, incorporated fully herein by reference, which declaration establishes conception of the instant invention prior to the earliest claimed priority date of the Lew Reference and at least as early as January 1, 2002. However, in the Office Action it is asserted that the evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Lew Reference to either a constructive reduction to practice or actual reduction to practice. Specifically, the issue appears to relate to Exhibit B which portends in the Declaration to be a schedule and percentage of time employees spent on programming. Applicant submits that the Exhibit attached to the declaration was the wrong Exhibit B. Applicant submits herein as Exhibit A the inventor's declaration of prior invention under 37 C.F.R. §1.131. The declaration attached hereto includes a correct Exhibit B which supports the table set forth in paragraph 8 of the declaration. As set forth in paragraphs 8 and 9 of the declaration supported by Exhibit B, between January 1, 2002 and August 2002 approximately 3,990 hours were spent by the inventor and others under the direction of the inventor diligently and without interruption on the (anyforms) invention which was the subject matter of the provisional patent application (USSN 60/404,491) which was filed on August 19, 2002, the date which the present application ultimately claims benefit.

Applicant additionally submitted pursuant to 37 §CFR 1.131 and attached as Exhibit B, to the previous amendment and response dated September 16, 2011 a document entitled "*Bama Companies, Inc. Field Service Survey Application Technical Design*" that is dated August 30, 2001 (hereinafter referred to as the "Technical Design") to provide further evidence regarding

Applicant's conception of the invention as set forth in the claims, attached as Exhibit B to the previous one and incorporated herein fully by reference.

It should be noted that Exhibit A and the correct Exhibit B have been previously presented to the Examiner in papers filed by the Applicant on September 24, 2007, and April 30, 2008, respectively, with Exhibit B being provided at the request of the Examiner to further establish Applicant's claim to priority. Additionally, the Examiner found Applicant's arguments in this regard persuasive as indicated in the Office Action.

As set forth in Applicant's amendment and response dated September 16, 2011, all of the steps of the method of at least Applicant's claim 1 can be found in the technical design document attached as Exhibit B to the previous amendment and response and incorporated fully herein. The Exhibit B attached hereto, as stated above, establishes diligence from a date prior to the date of reduction of practice of the Lew Reference, January 1, 2002 to Applicant's constructive reduction to practice date, the filing date of the provisional patent application on August 19, 2002.

Accordingly, taken all together, Exhibits A and B attached to the Applicant's Amendment and Response dated September 16, 2011 coupled with Exhibits A and B attached hereto inclusively establish Applicant's conception at least as early as January 1, 2002 and diligence from that date until the filing of the instant application. Lew was published on October 21, 2004 from an application filed on July 24, 2003 claiming priority to a provisional application filed on July 25, 2002. Further, Lew does not claim the same subject matter as that claimed by Applicant. As stated previously, the claims of the Lew Reference do not recite "tokenizing said questionnaire", as is required by claims 1 and 5 of the instant application. As a consequence, and

for at least this reason, these claims do not claim the same patentable invention as Lew. MPEP 715.

Still further, Lew, a pending application, published during the pendency of the instant application — i.e., Lew published in October of 2004, and the instant application was filed in August of 2003 claiming the benefit of an August of 2002 provisional application. Thus, Applicant is not barred by Lew's published patent under 35 USC 102(b).

In sum, by virtue of the Declaration attached to the Applicant's Amendment and Response dated September 16, 2011, incorporated herein by reference, and the enclosed Declaration under Rule 1.131 and other evidence, the Lew Reference has been removed as a prior-art reference with respect to the subject matter of the instant application. Reconsideration and allowance of claim 1 is respectfully requested.

Additionally, and for at least the reasons set out above, Applicant respectfully requests reconsideration and allowance of claims 5 and 7 which both depend from claim 1 and have been rejected based on the same reference.

Claim 7 is rejected in the Office Action under 35 U.S.C. §102(e) as being anticipated by Sendowski, et al., U.S. Publication No. 2003/0198934 (hereinafter the "Sendowski Reference"). Reconsideration of claim 7 is respectfully requested.

Applicant's previous demonstration has additionally removed the Sendowski Reference at least with respect to these claims. Sendowski was filed March 29, 2002 and published October 23, 2003. However, the Applicant has conclusively demonstrated in the Declaration attached as Exhibit A to the Amendment and Response dated September 16, 2011 and the Technical Design document attached as Exhibit B as set forth above and incorporated herein

fully by reference, that he conceived at least as early as January 1, 2002, and pursuant to the Declaration attached as Exhibit A hereto with its attachment Exhibit B that he exercised due diligence from at least the date of conception until the instant application was filed on August 19, 2003, claiming priority from a United States Provisional patent application filed August 19, 2002.

In addition, Sendowski does not claim the same invention as that claimed by the Applicant. Each pending claim (1-51) of the Sendowski Reference requires a "branch script object", whereas the claims of the instant application do not include such an element. As a consequence, at least Claim 7 does not claim the same patentable invention as that claimed by the Sendowski Reference.

Further, Sendowski, a pending application, published during the pendency of the instant application — i.e., Sendowski was published in October of 2003, and the instant application was filed in August of 2003 claiming the benefit of August of 2002. Thus, Applicant is not barred by Sendowski's published patent under 35 USC 102(b).

As a consequence, by virtue of the Declarations and submissions under Rule 1.131, set forth above, the Sendowski Reference has been removed as a prior-art reference with respect to the subject matter of the instant application, and rejection based on this reference for any reason is improper. Thus, Sendowski is traversed and claim 7 should be allowed to issue, which is respectfully requested.

Claim Rejections - 35 USC § 103

Claims 2-4, 6, and 9-11 are rejected in the Office Action under 35 U.S.C. 103(a) as being unpatentable over the Lew Reference as applied in claim **1** above, in view of the Sendowski

Reference. Claims 2-4 and 6 depend from claim 1 and are allowable at least for the reasons set forth above with regard to claim 1. Reconsideration and allowance of claims 2-4 and 6 is respectfully requested.

Applicant notes that the foregoing has established a claim 1 conception date at least as early as January 1, 2002, and diligence at least from that date until the instant filing date. As a consequence, Lew has been removed as a reference at least with respect to claims 2-4 and 6.

Further, Applicant's previous demonstration has additionally removed Sendowski as a reference at least with respect to these claims. Sendowski was filed March 29, 2002 and published October 23, 2003. However, the Applicant has conclusively demonstrated in his attached Declaration that he conceived at least as early as January 1, 2002, and that he exercised due diligence from at least the date of conception until the instant application was filed on August 19, 2003, claiming priority from a United States Provisional patent application filed August 19, 2002. Further, Sendowski does not claim the same invention as that claimed by the Applicant. Each pending claim (1-51) of the Sendowski reference requires a "branch script object", whereas the claims of the instant application do not include such an element. As a consequence, at least Applicant's claims 2-4 do not claim the same patentable invention as that claimed by Sendowski.

Still further, Sendowski, a pending application, published during the pendency of the instant application — i.e., Sendowski was published in October of 2003, and the instant application was filed in August of 2003 claiming the benefit of August of 2002. Thus, Applicant is not barred by Sendowski's published patent under 35 USC 102(b).

As a consequence, by virtue of the Declarations and submissions under Rule 1.131, set forth above, the Sendowski Reference has been removed as a prior-art reference with respect to the subject matter of the instant application, and rejection based on this reference for any reason is improper. Thus, Sendowski is traversed and claims 2-4 and 6 should be allowed to issue, which is respectfully requested.

With respect to Claims 9-11 as-amended, it is believed that Applicant's Declaration attached hereto, including the correct Exhibit B as well as the attachment B to the Amendment and Response dated September 16, 2011 incorporated herein fully by reference have established a conception date for claim **9** that predates both Lew and Sendowski coupled with the requisite diligence to Applicant's filing date on August 19, 2003, claiming priority from the United States Provisional Patent Application filed August 19, 2002.

Further, neither Lew nor Sendowski claim the same invention as that claimed by the Applicant. Each pending claim (1-51) of the Sendowski reference requires a "branch script object", whereas the claims of the instant application do not include such an element. As a consequence, at least Applicant's claims 9-11 do not claim the same patentable invention as that claimed by Sendowski.

As stated previously, the claims of the Lew reference do not teach or suggest modifying a questionnaire with incremental changes as is required by claims 9-11 of the instant application. As a consequence, and for at least this reason, Applicant's claims 9-11 do not claim the same patentable invention as Lew.

Still further, neither Sendowski, nor Lew bar Applicant's claims under 35 U.S.C. §102(b) as has been discussed previously.

As a consequence, by virtue of the enclosed Declaration under Rule 1.131, Sendowski and/or Lew have been removed as prior-art references with respect to the subject matter of the instant application and rejection based on this reference for any reason is improper. Thus, Sendowski is traversed and claims 9-11 should be allowed to issue, which is respectfully requested.

The Examiner has additionally rejected claim 8 as being unpatentable over Sendowski as applied to Claim 7 and in view of Joao, US Pat. Pub. 2001/0056374. It is said that Sendowski does not explicitly show assessing a charge for each transferred response received by the central computer, but Joao does.

Claim 8 depends from claim 7 from which, as Applicant has already established, Sendowski has been removed as a reference.

Thus, claim 8 depends from a claim believed to be allowable and, as such, should similarly be allowed. Thus, reconsideration and allowance of claim 8 is respectfully requested.

Conclusion

This paper is intended to constitute a complete response to the Examiner's Office Action mailed September 20, 2012. Please contact the undersigned if it appears that a portion of this response is missing or if there remain any additional matters to resolve. If the Examiner feels that processing of the application can be expedited in any respect by a personal conference, please consider this an invitation to contact the undersigned by phone.

Respectfully submitted,

Date: December 28, 2012

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#21001-v1

EXHIBIT
tabbies
A
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	J. David PAYNE
Serial No.:	10/643,516
Filed:	08/19/2003
Confirmation No.:	4504
Title:	System and Method for Data Management
Art Unit:	2151
Examiner:	Nghi V. Tran

DECLARATION OF PRIOR INVENTION IN THE UNITED STATES TO OVERCOME CITED PATENTS UNDER 37 CFR 1.131

I, J. DAVID PAYNE, declare concerning the subject matter claimed in the above-identified application that:

1. I conceived and invented the entire subject matter of the above-identified patent application.

2. All of the acts of invention described herein took place in the United States.

3. Prior to January 1, 2002, I conceived the idea of a system and method for the management of data collected from a remote computing device wherein a questionnaire which may be represented by a plurality of tokens is transmitted to the remote computing device; the questionnaire is then executed by the remote computing device and at least a portion of the response(s) to the questionnaire is/are transmitted to a network which may be a loosely networked computer.

4. As is set out in more detail below, subsequent to January 1, 2002, I and others under my direction worked diligently to further reduce to practice and improve various

embodiments of this invention until the filing of my provisional patent application on August 19, 2002.

5. Prior to January 1, 2002 and at least until August 19, 2002, I was President of Macrosolve, Inc. ("Macrosolve"), the assignee of the present patent application.

6. Beginning in January 2002, Macrosolve moved to a larger facility to accommodate the hiring of additional employees, and specifically computer programmers, primarily for the purpose of writing code for my invention which was internally named "anyforms."

7. Macrosolve, Inc. kept track of the percentage of time each computer programmer and other related employees dedicated to projects within the company in the relevant time period. Schedules, with employee names redacted, including the percentage of time devoted by each such employee between January 1, 2002 and July 31, 2002, is attached hereto as Exhibit B.

8. Based on Exhibit B, the table below shows number of employees working on the "anyforms" project and the average percentage of each employee's time devoted to the "anyforms" project for the month indicated. The column on the right shows a calculation of the approximate total number of person hours spent on the "anyforms" project by month (assuming 4 weeks of 40 total hours per week).

MONTH	NO. OF EMPLOYEES WORKING ON THE "ANYFORMS" PROJECT	AVERAGE PERCENTAGE OF EACH EMPLOYEE'S TIME	TOTAL HOURS DEVOTED TO "ANYFORMS"
Jan. 2002	6	8	80
Feb. 2002	6	12	120
Mar. 2002	6	18	170
Apr. 2002	7	38	430
May 2002	7	76	850
June 2002	9	83	1190
July 2002	9	80	1150
		TOTAL	3990

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9. Accordingly, between January 1, 2002 and August 2002, approximately 3990 hours were spent by me, and others under my direction, diligently and without interruption on the "anyforms" invention which was the subject matter of the provisional patent application (USSN 60/404,491) filed on August 19, 2002, the date from which the present application claims benefit.

Declaration

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

Date: 8.17.07

J. DAVID PAYNE

#412571 v1

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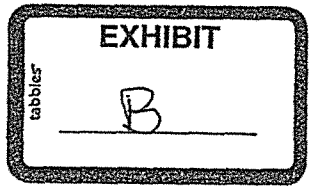

Employee 1

	anyforms	anycollect	Project En	Consulting	Support	Hardware	Royalty	MSI	TOTAL	
January-02	10	15	5						70	100
February-02	15	55	5						25	100
March-02	20	75	3						2	100
April-02	50	49							1	100
May-02	100									100
June-02	100									100
July-02	100									100

Employee 2

	anyforms	anycollect	Project En	Consulting	Support	Hardware	Royalty	MSI	TOTAL
January-02	5	5	10					80	100
February-02	20	10	10					60	100
March-02	35	50						15	100
April-02	75		10					15	100
May-02	100								100
June-02	100								100
July-02	100								100

Employee 3

	anyforms	anycollect	Project En	Consulting	Support	Hardware	Royalty	MSI	TOTAL	
January-02	10	25	5	5					55	100
February-02	10	40	10						40	100
March-02	20	75							5	100
April-02	30	60	5						5	100
May-02	97	0							3	100
June-02	97	0							3	100
July-02	97	0							3	100

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Employee 4

	anyforms	anycollect	Project En	Consulting	Support	Hardware	Royalty	MSI	TOTAL	
January-02		50							50	100
February-02		50							50	100
March-02		50							50	100
April-02	25	25							50	100
May-02	25	25							50	100
June-02	50								50	100
July-02	50								50	100

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Employee 5

	anyforms	anycollect	Project En	Consulting	Support	Hardware	Royalty	MSI	TOTAL	
January-02	10	10							80	100
February-02	15	30							55	100
March-02	15	75							10	100
April-02	60	30							10	100
May-02	100									100
June-02	100									100
July-02	100									100

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Employee 6

	anyforms	anycollect	Project En	Consulting	Support	Hardware	Royalty	MSI	TOTAL
January-02	5	5	60		30				100
February-02	5	10	50		35				100
March-02	10	5	55		30				100
April-02	10	5	60		25				100
May-02	30		50		20				100
June-02	25		50		25				100
July-02	25		50		25				100

Employee 7

August

	anyforms	anycollect	Project En	Consulting	Support	Hardware	Royalty	MSI	TOTAL
January-02									0%
February-02									0%
March-02									0%
April-02									0%
May-02									0%
June-02	100%								100%
July-02	100%								100%

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Employee 8

August

	anyforms	anycollect	Project Engagn	Consulting	Support	Hardware	Royalty	MSI	TOTAL	
January-02	10%	20%							70%	100%
February-02	10%	20%							70%	100%
March-02	15%	50%							35%	100%
April-02	20%	50%							30%	100%
May-02	80%	5%							15%	100%
June-02	75%								25%	100%
July-02	50%								50%	100%

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Employee 9

August

	anyforms	anycollect	Project En	Consulting	Support	Hardware	Royalty	MSI	TOTAL
January-02									0%
February-02									0%
March-02									0%
April-02									0%
May-02									0%
June-02	100%								100%
July-02	100%								100%

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IBM

Dictionary of Computing

▼ The most comprehensive computing dictionary ever published

▼ More than 18,000 entries

EXHIBIT C

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IBM DICTIONARY OF COMPUTING

Compiled and edited by

GEORGE McDANIEL

McGRAW-HILL, INC.

New York San Francisco Washington, D.C. Auckland Bogotá
Caracas Lisbon London Madrid Mexico City Milan
Montreal New Delhi San Juan Singapore
Sydney Tokyo Toronto

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This is a major revision of the *IBM Dictionary of Computing,* SC20-1699-8, which is made obsolete by this edition. Changes are made periodically to the information provided herein.

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A portion of a physical volume
:m as a volume. (2) In the AIX
collection of physical partitions
ical partitions all contained in a
). Logical volumes are expandable
tal physical volumes in a volume

Manager In the AIX operating
:hat manages disk space at a logical
fixed-disk resources by mapping
:al and physical storage, allowing
iguous, span multiple disks, repli-
ally expanded.

n The combination of storage and a
:ogram treated as a unit by the 3601
:ation Controller.

nputer security, a resident computer
ers the perpetration of an unauthor-
ticular states of the system are real-

:unctional design that uses formal
lescription, such as symbolic

:vice that performs logic operations.

graphic representation of a logic

) Synonym for gate. (2) See combi-
ment, sequential logic element.

TAM, an error condition that results
equest (a program logic error).

Deprecated term for switching func-

An instruction in which the opera-
s a logic operation. (I) (A)

(1) An operation that follows the
ic logic. (I) (A) (2) An operation
haracter of the result depends only on
ling character of each operand.
Synonymous with logical operation.

ming A method for structuring pro-
of logical rules with predefined algo-
processing of input data to a program
rules of that program. (T)

onym for logical shift.

logic short fault A fault in logic circuitry in which a short circuit exists between logic blocks and that operates as if it were an additional logic block.

Note: The additional logic block can function either as a logic AND or a logic OR.

logic symbol A symbol that represents an operator, function, or functional relationship. (T) (A)

logic test In TPNS, a conditional test on an input or output message, a counter, or other item using the TPNS IF statement. The IF actions can be used to control the message generation process.

logic unit (1) A part of a computer that performs logic operations and related operations. (I) (A) (2) See arithmetic and logic unit.

logic variable Deprecated term for switching variable.

log in (1) To begin a session at a display station. (2) To begin a session with a remote resource. (3) The act of identifying oneself as authorized to use a resource. Often the system requires a user ID and password to check authorization to use the resource. (4) See also log on.

login In the AIX operating system, the act of gaining access to a computer system by entering identification and authentication information at the workstation.

login directory In the AIX operating system, the directory accessed when a user first logs in to the system.

login domain The location for the resources accessed when a user first logs in to a network.

log-initiated checkpoint See simple checkpoint, system scheduled checkpoint.

login name In the AIX operating system, string of characters that uniquely identifies a user to the system.

login session In the AIX operating system, the period of time during which a user of a workstation can communicate with an interactive system, usually the elapsed time between log in and log off.

login shell In the AIX operating system, the shell that is started when a user logs into the computer system. See also shell.

logmode table Synonym for logon mode table.

logo A letter, combination of letters, or symbol that identifies a product or company.

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logical volume (1) A portion of a physical volume viewed by the system as a volume. (2) In the AIX operating system, a collection of physical partitions organized into logical partitions all contained in a single volume group. Logical volumes are expandable and can span several physical volumes in a volume group.

Logical Volume Manager In the AIX operating system, a program that manages disk space at a logical level. It controls fixed-disk resources by mapping data between logical and physical storage, allowing data to be discontiguous, span multiple disks, replicated, and dynamically expanded.

logical workstation The combination of storage and a 3601 application program treated as a unit by the 3601 Finance Communication Controller.

logic bomb In computer security, a resident computer program that triggers the perpetration of an unauthorized act when particular states of the system are realized.

logic design A functional design that uses formal methods of description, such as symbolic logic. (T) (A)

logic device A device that performs logic operations. (T) (A)

logic diagram A graphic representation of a logic design. (T) (A)

logic element (1) Synonym for gate. (2) See combinational logic element, sequential logic element.

logic error In VTAM, an error condition that results from an invalid request (a program logic error).

logic function Deprecated term for switching function.

logic instruction An instruction in which the operation part specifies a logic operation. (I) (A)

logic operation (1) An operation that follows the rules of symbolic logic. (I) (A) (2) An operation in which each character of the result depends only on the corresponding character of each operand. (I) (A) (3) Synonymous with logical operation.

logic programming A method for structuring programs as sets of logical rules with predefined algorithms for the processing of input data to a program according to the rules of that program. (T)

logic shift Synonym for logical shift.

logic short fault A fault in logic circuitry in which a short circuit exists between logic blocks and that operates as if it were an additional logic block.

Note: The additional logic block can function either as a logic AND or a logic OR.

logic symbol A symbol that represents an operator, function, or functional relationship. (T) (A)

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logmode table Synonym for logon mode table.

logo A letter, combination of letters, or symbol that identifies a product or company.

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log off (1) To end a session. Synonymous with log out. (T) (2) To request that a session be terminated. (3) See also sign-off.

logoff (1) The procedure by which a user ends a terminal session. (2) In VTAM, an unformatted session-termination request.

log on (1) To initiate a session. Synonymous with log in. (T) (2) In SNA products, to initiate a session between an application program and a logical unit (LU). (3) See also log in, sign-on.

logon (1) The procedure by which a user begins a terminal session. (2) In VTAM, an unformatted session-initiation request for a session between two logical units.

logon data (1) In VTAM, the user data portion of a field-formatted or unformatted session-initiation request. (2) In VTAM, the entire logon sequence or message from an LU. Synonymous with logon message.

logon-interpret routine In VTAM, an installation exit routine, associated with an interpret table entry, that translates logon information. It may also verify the logon.

logon message Synonym for logon data.

logon mode In VTAM, a subset of session parameters specified in a logon mode table for communication with a logical unit. See also session parameters.

logon mode table (1) In VTAM, a set of entries for one or more logon modes. Each logon mode is identified by a logon mode name. (2) In DPPX, a table in which each entry defines the characteristics of a session between two logical units.

logon request See logon.

logo screen On a personal computer, a hello screen that identifies the name and owner of an application software product.

log out Synonym for log off. (T)

logo window In SAA Advanced Common User Access architecture, a modal dialog box containing the application copyright notice and other information that identifies the application.

log tape write ahead (LTWA) In IMS/VS, an option that ensures that a database log record for a data change is written to the system log before the changed data are written to the database.

logtype entry In ACF/TCAM, a terminal-table entry associated with a queue on which complete messages reside while awaiting transfer to the logging medium. A logtype entry is not needed if message segments are only to be logged. See also cascade entry, group entry, line entry, process entry, single entry.

log write-ahead (LWA) In IMS/VS, the process of writing records of completed operations to the write-ahead data set before entering them in the online log data set.

long (1) In the AIX object data manager, a terminal descriptor type used to define a variable as a signed 4-byte number. See also terminal descriptor. (2) A signed 4-byte number.

long comment In the AS/400 system, up to a full-screen description of a field, record format, or file. Long comments are typed when the field, record format, or file is created or changed, and displayed either from IDDU or Query.

long constant In the AIX operating system, a 4-byte integer constant followed by the letter "l" or "L."

long format In binary floating-point storage formats, the 64-bit representation of a binary floating-point number, not-a-number, or infinity. Contrast with short format.

longitudinal magnetic recording A technique of magnetic recording in which magnetic polarities representing data is aligned along the length of the recording track. (T)

longitudinal offset loss In waveguide-to-waveguide coupling, synonym for gap loss. (E)

longitudinal parity check (1) A parity check on a row of binary digits that are members of a set forming a matrix; for example, a parity check on the bits of a track in a block on a magnetic tape. (T) (2) A system of error checking performed at the receiving station after a block check character has been accumulated. (3) See also transverse parity check. (4) Synonymous with longitudinal redundancy check.

longitudinal redundancy check (LRC) Synonym for longitudinal parity check.

longitudinal redundancy check character On a magnetic tape where each character is represented in a lateral row of bits, a character used for checking the parity of each track in the longitudinal direction. Such a character is usually the last character recorded in each block and is used in some magnetic recording systems to reestablish the initial recording status. (A)

long lens In photography, a telephoto lens.

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service virtual machine In the VM/XA Migration Aid, a virtual machine that provides system services. These services include accounting, error recording, and services provided by licensed programs.

servo See servomechanism.

servo mark A standard mark printed below the print contrast mark. It is used by the printer to position the optical-mark-sensor head over the print contrast mark.

servomechanism (1) An automatic device that uses feedback to govern the physical position of an element. (A) (2) A feedback control system in which at least one of the system signals represents mechanical motion. (A)

SESSEND Session ended.

SESSER Session serialization.

session (1) In network architecture, for the purpose of data communication between functional units, all the activities which take place during the establishment, maintenance, and release of the connection. (T) (2) A logical connection between two network accessible units (NAUs) that can be activated, tailored to provide various protocols, and deactivated, as requested. Each session is uniquely identified in a transmission header (TH) accompanying any transmissions exchanged during the session. (3) The period of time during which a user of a terminal can communicate with an interactive system, usually, elapsed time between logon and logoff. (4) The activity of all tasks within a single System/38 RJEF subsystem communicating with a single host system. (5) In remote communications, a period of communication with a remote system or host system. (6) In the AS/400 system, the length of time that starts when a user signs on at a display station and ends when the user signs off. (7) In the AS/400 system with finance communications, a logical connection by which an AS/400 system communicates with a finance controller. (8) In the AS/400 system with RJE, the activity of all tasks within a single AS/400 system communicating with a single host system. (9) In the AS/400 system with 3270 emulation, the activity that occurs on the communications line between the time that the user enters the command to start emulation and the time the user ends the emulation job.

session activation In SNA, the process of exchanging a session activation request and a positive response between network addressable units (NAUs). See also LU-LU session initiation. Contrast with session deactivation.

session activation request In SNA, a request that activates a session between two network addressable units (NAUs) and specifies session parameters that control various protocols during session activity; for example, BIND and ACTPU. Contrast with session deactivation request.

session address space In VTAM, an ACB address space or an associated address space in which an OPNDST or OPNSEC macroinstruction is issued to establish a session. See also ACB address space, associated address space.

session awareness (SAW) data Data collected by the NetView program about a session that includes the session type, the names of session partners, and information about the session activation status. It is collected for LU-LU, SSCP-LU, SSCP-PU, and SSCP-SSCP sessions and for non-SNA terminals not supported by NTO. It can be displayed in various forms, such as most recent sessions lists.

SESSIONC indicators In VTAM, indicators that can be sent from one node to another without using SEND or RECEIVE macroinstructions; for example, SDT, clear, and STSN.

session collection The NPM subsystem that collects, monitors, and displays data collected in the host for analysis.

session connector A session-layer component in an APPN network node or in a subarea node boundary or gateway function that connects two stages of a session. Session connectors swap addresses from one address space to another for session-level intermediate routing, segment session message units as needed, and (except for gateway function session connectors) adaptively pace the session traffic in each direction. See also half-session.

session control (SC) In SNA: (a) one of the components of transmission control. Session control is used to purge data flowing in a session after an unrecoverable error occurs, resynchronize the data flow after such an error, and perform cryptographic verification; and (b) an RU category used for requests and responses exchanged between the session control components of a session and for session activation/deactivation requests and responses.

session control block (SCB) In NPM, control blocks in common storage area for session collection.

session control in-bound processing exit A user exit that receives control when certain request units (RUs) are received by VTAM.

session control record The first record in the chain of records in the transaction file of each display station.

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Electronic Patent Application Fee Transmittal

Application Number:	12910706
Filing Date:	22-Oct-2010
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Filer:	Scott R. Zingerman/Jamie Robinson
Attorney Docket Number:	71855/10-351

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	2251	1	75	75

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Exhibit 1002
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Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Statutory or terminal disclaimer	2814	1	80	80
		Total in USD ($)		**155**

Electronic Acknowledgement Receipt

EFS ID:	14575634
Application Number:	12910706
International Application Number:	
Confirmation Number:	8703
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Customer Number:	22206
Filer:	Scott R. Zingerman/Jamie Robinson
Filer Authorized By:	Scott R. Zingerman
Attorney Docket Number:	71855/10-351
Receipt Date:	28-DEC-2012
Filing Date:	22-OCT-2010
Time Stamp:	12:02:15
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$155
RAM confirmation Number	11475
Deposit Account	060540
Authorized User	ROBINSON, JAMIE A.

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer Filed	SCANNED_TerminalDisclaimer12-28-2012.pdf	108619 27c3576cb5d8807524914ec36e8bef9f0ba67379	no	1
Warnings:					
Information:					
2	Amendment/Req. Reconsideration-After Non-Final Reject	SCANNED_AmendmentAndResponse12-28-2012.pdf	8836390 88cfb71a1cdebb8d06d73568ee8363ed249af490	no	53
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32020 b3f6e380233161d7764b064d908e179e8d26555e	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	8977029		

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

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

New International Application Filed with the USPTO as a Receiving Office

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PTO/SB/26 (08-11)
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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 71855/10-351

In re Application of: Payne

Application No.: 12/910,706

Filed: 10/22/2010

For: SYSTEM AND METHOD FOR DATA MANAGEMENT

The owner*, MacroSolve, Inc., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 7,822,816 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

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

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

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

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 35422

Signature — December 28, 2012 (Date)

Scott R. Zingerman
Typed or printed name

918/599-0621
Telephone Number

☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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PTO/SB/06 (07-06)
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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
12/910,706	10/22/2010	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☒ RATE ($)	SMALL ENTITY ☒ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 12/28/2012	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 29	Minus	** 31	= 0	X $31 =	0	OR	X $ =	
Independent (37 CFR 1.16(h))	* 8	Minus	***8	= 0	X $125 =	0	OR	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE	

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

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

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

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

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Legal Instrument Examiner:
/LINDA HUMES/

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Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	12/910,706	PAYNE, J. DAVID	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 12/28/12	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

Angie Walker

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PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12910706
Filing Date	2010-10-22
First Named Inventor	Payne
Art Unit	2451
Examiner Name	
Attorney Docket Number	71855/10-351

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7085800	B2	2006-08-01	Abbott, et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12910706
	Filing Date	2010-10-22
	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	
	Attorney Docket Number	71855/10-351

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Examiner Signature		Date Considered	

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

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12910706
	Filing Date	2010-10-22
	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	
	Attorney Docket Number	71855/10-351

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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

OR

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

☐ See attached certification statement.

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

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/scott r. zingerman/	Date (YYYY-MM-DD)	2013-01-16
Name/Print	Scott R. Zingerman	Registration Number	35422

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	12910706
Filing Date:	22-Oct-2010
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Filer:	Scott R. Zingerman/Jamie Robinson
Attorney Docket Number:	71855/10-351

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	14717175
Application Number:	12910706
International Application Number:	
Confirmation Number:	8703
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Customer Number:	22206
Filer:	Scott R. Zingerman/Jamie Robinson
Filer Authorized By:	Scott R. Zingerman
Attorney Docket Number:	71855/10-351
Receipt Date:	16-JAN-2013
Filing Date:	22-OCT-2010
Time Stamp:	16:24:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$180
RAM confirmation Number	3380
Deposit Account	060540
Authorized User	ROBINSON, JAMIE A.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS2_01-16-2013.pdf	612147 b90e9b70eca0ccec54b8b7f8774753aa6ba431ee	no	4
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30200 f85fcd1d1080eefd7435f9b2c67249495d270cc5	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	642347		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	12910706
Filing Date	2010-10-22
First Named Inventor	Payne
Art Unit	2451
Examiner Name	BACKHEAN TIV
Attorney Docket Number	71855/10-351

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5666553		1997-09-09	CROZIER	
	2	5684990		1997-11-04	BOOTHBY	
	3	5842195		1998-11-24	PETERS et al.	
	4	5943676		1999-08-24	BOOTHBY	
	5	6141664		2000-10-31	BOOTHBY	
	6	6151581		2000-11-21	KRAFTSON et al.	
	7	6163811		2000-12-19	PORTER	
	8	6212529	B1	2001-04-03	BOOTHBY et al.	

Unified Patents
Exhibit 1002
Page 258 of 2584

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12910706
	Filing Date	2010-10-22
	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	BACKHEAN TIV
	Attorney Docket Number	71855/10-351

	9	6405218	B1	2002-06-11	BOOTHBY	
	10	6421717	B1	2002-07-16	KLOBA et al.	
	11	6826540	B1	2004-11-30	PLANTEC et al.	
	12	7310350	B1	2007-12-18	SHAO et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20010056374	A1	2001-12-27	JOAO	
	2	20020007303	A1	2002-01-17	BROOKLER et al.	
	3	20020107931	A1	2002-08-08	SINGH et al.	
	4	20020143610	A1	2002-10-03	MUNYER	
	5	20020160773	A1	2002-10-31	GRESHAM et al.	

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	Attorney Docket Number	71855/10-351

	6	20030093405	A1	2003-05-15	MAYER	
	7	20030126010	A1	2003-07-03	BARNS-SLAVIN	
	8	20030198934	A1	2003-10-23	SENDOWSKI et al.	
	9	20040117244	A1	2004-06-17	SCOTT	
	10	20040210472	A1	2004-10-21	LEW et al.	
	11	20050009465	A1	2005-01-13	ROSS et al.	

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	WO0184433	WO	A1	2001-11-08	Mobliss, Inc.		☐

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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	Filing Date	2010-10-22
	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	BACKHEAN TIV
	Attorney Docket Number	71855/10-351

	1	GIRARDOT, ET AL., "EFFICIENT REPRESENTATION AND STREAMING OF XML CONTENT OVER THE INTERNET MEDIUM", 07/30/2000, Page(s) 67-70, Publisher: MULTIMEDIA AND EXPO 2000 ICME 2000.	☐
	2	PETSAS, ET AL. , "WAP-Based personalised health care services; ", "Proceedings of the 23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society", 10/25/2001, Page(s) 3536-3539, Volume 1 of 4	☐
	3	ANONYMOUS, "WAP BINARY XML CONTENT FORMAT", 06/24/1999, Page(s) 1-14, Published in: INTERNET DOCUMENT (ONLINE)	☐

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

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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

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

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	Art Unit	2451
	Examiner Name	BACKHEAN TIV
	Attorney Docket Number	71855/10-351

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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OR

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

☐ See attached certification statement.

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

☐ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/scott r. zingerman/	Date (YYYY-MM-DD)	2013-02-06
Name/Print	Scott R. Zingerman	Registration Number	35422

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

Unified Patents
Exhibit 1002
Page 262 of 2584

Privacy Act Statement

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Electronic Patent Application Fee Transmittal

Application Number:	12910706
Filing Date:	22-Oct-2010
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Filer:	Scott R. Zingerman/Jamie Robinson
Attorney Docket Number:	71855/10-351

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	14889817
Application Number:	12910706
International Application Number:	
Confirmation Number:	8703
Title of Invention:	SYSTEM AND METHOD FOR DATA MANAGEMENT
First Named Inventor/Applicant Name:	J. David Payne
Customer Number:	22206
Filer:	Scott R. Zingerman/Jamie Robinson
Filer Authorized By:	Scott R. Zingerman
Attorney Docket Number:	71855/10-351
Receipt Date:	06-FEB-2013
Filing Date:	22-OCT-2010
Time Stamp:	14:04:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$180
RAM confirmation Number	382
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

Unified Patents
Exhibit 1002
Page 266 of 2584

1	Information Disclosure Statement (IDS) Form (SB08)	IDS3_02-06-2013.pdf	613282 d93167b3168df01573f0ba5e4e64241904cc28e9	no	6
Warnings:					
Information:					
2	Non Patent Literature	GIRARDOT_EfficientRepresentationAndStreaming.pdf	289252 48c71564bc9578e1f44ae8e77d6a848796671264	no	4
Warnings:					
Information:					
3	Non Patent Literature	PETSAS_WAP-BASEDPERSONALISED.pdf	492566 de0d1257089efd41f92c8dd678c4b4b4aa4c1b9d	no	4
Warnings:					
Information:					
4	Non Patent Literature	WAPBinaryXMLContentFormat.pdf	754574 e71670d876a093c5592d956908ac82521a7514be	no	14
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	30200 03f4c8fbafd1a57a2ee112dffc3eb306f75b039d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2179874		

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

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
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<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

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(Not for submission under 37 CFR 1.99)

Application Number	12910706
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First Named Inventor	Payne
Art Unit	2451
Examiner Name	BACKHEAN TIV
Attorney Docket Number	71855/10-351

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	4345315		1982-08-17	CADOTTE et al.	
	2	4603232		1986-07-29	KURLAND et al.	
	3	4926255		1990-05-15	VON KOHORN	
	4	4954699		1990-09-04	COFFEY et al.	
	5	5195183		1993-03-16	MILLER et al.	
	6	5496175		1996-03-05	OYAMA et al.	
	7	5592480		1997-01-07	CARNEY et al.	
	8	5704029		1997-12-30	WRIGHT, JR.	

Unified Patents
Exhibit 1002
Page 268 of 2584

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	12910706
	Filing Date	2010-10-22
	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	BACKHEAN TIV
	Attorney Docket Number	71855/10-351

	9	5784539		1998-07-21	LENZ	
	10	5813019		1998-09-22	VAN DE VANTER	
	11	5893098		1999-04-06	PETERS et al.	
	12	5896502		1999-04-20	SHIEH et al.	
	13	5913040		1999-06-15	RAKAVY et al.	
	14	6000000		1999-12-07	HAWKINS et al.	
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	First Named Inventor	Payne
	Art Unit	2451
	Examiner Name	BACKHEAN TIV
	Attorney Docket Number	71855/10-351

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	Examiner Name	BACKHEAN TIV
	Attorney Docket Number	71855/10-351

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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

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☐ See attached certification statement.

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SIGNATURE

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

Signature	/scott r. zingerman/	Date (YYYY-MM-DD)	2013-02-11
Name/Print	Scott R. Zingerman	Registration Number	35422

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

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(12) PATENT
(19) AUSTRALIAN PATENT OFFICE

(11) Application No. AU 199860667 B2
(10) Patent No. 716184

(54) Title
Network controller for cable television delivery systems

(51)[6] International Patent Classification(s)
H04N 007/16 H04N 017/00
H04N 007/173

(21) Application No: 199860667 (22) Application Date: 1998.04.06

(30) Priority Data

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(56) Related Art
WO 86/01963
WO 89/09528
EP 506435

ABSTRACT

A novel network controller (214) for use with a digital cable headend (208) capable of monitoring and controlling set top terminals (220) in a television program delivery system (200) is described. The invention relates to methods and apparatus for a network controller (214) that manages a configuration of set top terminals (220) in a program delivery system (200). The invention is particularly useful in program delivery systems (200) with hundreds of channels of programming, a menu driven program selection system, and a program control information signal that carries data and identifies available program choices. Specifically, the invention modifies a program control information signal at the cable headend (208) before the modified signal is transmitted to each set top terminal (220). This signal is used with polling methods to receive upstream data from the set top terminals (220). The invention initiates such upstream data retrieval, gathers all data received and compiles viewer demographics information and programs watched information. The invention processes this data and information to generate packages of advertisements, as well as account and billing reports, targeted towards each set top terminal (220). The invention uses upstream data reception hardware, databases and processing hardware and software to accomplish these functions.

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AUSTRALIA

ORIGINAL
COMPLETE SPECIFICATION
STANDARD PATENT

Application Number:
Lodged:

Invention Title: NETWORK CONTROLLER FOR CABLE TELEVSION DELIVERY SYSTEMS

The following statement is a full description of this invention, including the best method of performing it known to us :-

NETWORK CONTROLLER FOR CABLE TELEVISION DELIVERY SYSTEMS

RELATED APPLICATIONS

This application is a continuation-in-part of application Serial Number 07/991,074 filed December 9, 1992 entitled TELEVISION PROGRAM PACKAGING AND DELIVERY SYSTEM WITH MENU DRIVEN SUBSCRIBER ACCESS. The following other continuation-in-part applications, also based on the above-referenced patent application, are incorporated herein by reference:

Ser. No. 08/160,281, filed December 2, 1993, entitled REPROGRAMMABLE TERMINAL FOR SUGGESTING PROGRAMS OFFERED ON A TELEVISION PROGRAM DELIVERY SYSTEM

Ser. No. 08/160,282, filed December 2, 1993, entitled AN OPERATIONS CENTER FOR A TELEVISION PROGRAM PACKAGING AND DELIVERY SYSTEM

Ser. No. 08/160,193, filed December 2, 1993, entitled SET TOP TERMINAL FOR CABLE TELEVISION DELIVERY SYSTEMS

Ser. No. 08/160,194, filed December 2, 1993, entitled ADVANCED SET TOP TERMINAL FOR CABLE TELEVISION DELIVERY SYSTEMS

Ser. No.08/160,283, filed December 2, 1993, entitled DIGITAL CABLE HEADEND FOR CABLE TELEVISION DELIVERY SYSTEM

TECHNICAL FIELD

The invention relates to television entertainment systems for providing television programming to consumer homes. More particularly, the invention relates to a

network controller that monitors, controls and manages a television program delivery network from a cable headend.

BACKGROUND OF THE INVENTION

Advances in television entertainment have been primarily driven by breakthroughs in technology. In 1939, advances on Vladmir Zworykin's picture tube provided the stimulus for NBC to begin its first regular broadcasts. In 1975, advances in satellite technology provided consumers with increased programming to homes.

Many of these technology breakthroughs have produced inconvenient systems for consumers. One example is the ubiquitous three remote control home, having a separate and unique remote control for the TV, cable box and VCR. More recently, technology has provided cable users in certain parts of the country with 100 channels of programming. This increased program capacity is beyond the ability of many consumers to use effectively. No method of managing the program choices has been provided to consumers.

Consumers are demanding that future advances in television entertainment, particularly programs and program choices, be presented to the consumer in a user friendly manner. Consumer preferences, instead of technological breakthroughs, will drive the television entertainment market for at least the next 20 years. As computer vendors have experienced a switch from marketing new technology in computer hardware to marketing better useability, interfaces and service, the television

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entertainment industry will also experience a switch from new technology driving the market to consumer useability driving the market.

Consumers want products incorporating new technology that are useful, and will no longer purchase new technology for the sake of novelty or status. Technological advances in sophisticated hardware are beginning to surpass the capability of the average consumer to use the new technology. Careful engineering must be done to make entertainment products incorporating new technology useful and desired by consumers.

In order for new television entertainment products to be successful, the products must satisfy consumer demands. TV consumers wish to go from limited viewing choices to a variety of choices, from no control of programming to complete control. Consumers wish to advance from cumbersome and inconvenient television to easy and convenient television and keep costs down. Consumers do not wish to pay for one hundred channels when due to lack of programming information, they seldom, if ever, watch programming on many of these channels. Viewers wish their programming to be customized and targeted to their needs and tastes.

The concepts of interactive television, high definition television and 300 channel cable systems in consumer homes will not sell if they are not packaged, delivered and presented in a useable fashion to consumers. Consumers

are already being bombarded with programming options, numerous "free" cable channels, subscription cable channels and pay-per-view choices. Any further increase in TV entertainment choices, without a user friendly presentation and approach, will likely bewilder viewers with a mind-numbing array of choices.

The TV industry has traditionally marketed and sold its programs to consumers in bulk, such as continuous feed broadcast and long-term subscriptions to movie channels. The TV industry is unable to sell its programming in large quantities on a unit per unit basis, such as the ordering of one program. Consumers prefer a unit sales approach because it keeps costs down and allows the consumer to be more selective in their viewing.

In today's television world, networks manage the program lineup for individual channels. Each network analyzes ratings for television shows and determines the appropriate schedule or program lineup to gain market share and revenue from advertising. Program ratings are determined using a test group of viewers and statistical analysis methods. Since each channel is in competition with every other channel, there is no coordinated effort to organize television programming in a manner that primarily suits the viewers.

Advertising has become equally annoying, with viewers being "forced" to watch television commercials for goods and services that are neither needed nor desired. As a

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result, consumers have become impatient and dissatisfied with today's television delivery systems. Equally problematic, these television delivery systems do not have the capabilities or features necessary to operate in the digital environment. Consequently, advances in digital technology call for a new television program delivery system that is capable of satisfying varying consumer and viewer needs.

Existing cable headends are unequipped for the transition to a digital system. These cable headends have no means for monitoring and controlling the large numbers of program signals and advertisements that will eventually be passed on to both consumers and viewers. These cable headends are unequipped to manage account and billing information for set top terminals without relying on telephone lines. In addition, these cable headends have no means for targeting advertisements to particular consumers and viewers.

What is needed is a network controller for a digital cable headend used in a television delivery system.

What is needed is a versatile network controller for a cable headend.

What is needed is a network controller for use in a cable headend that is capable of operating in both the digital and analog environment.

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What is needed is certain components of a network controller for a digital cable headend used in a cable television delivery system.

What is needed is a network controller capable of controlling multiple video/audio program signals received by a cable headend from a satellite transponder.

What is needed is a network controller that can control the routing of both analog and digital video/audio program signals from cable headend to viewer homes.

What is needed is a network controller component for a cable headend that controls the combining the digital video/audio signals.

What is needed is a network controller that creates tiered programming by combining various digital video/audio signals.

What is needed is a network controller for a cable headend that accommodates different bandwidth availability between cable headend and certain viewer homes.

What is needed is a network controller capable of modifying program control information received from an external source.

What is needed is a network controller capable of targeting video to viewers.

What is needed is a network controller capable of targeting television commercials to specific consumers and viewers.

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What is needed is a network controller capable of gathering information on programs watched by viewers.

What is needed is a better method of determining program ratings.

What is needed is a network controller capable of managing account and billing information.

The present invention is addressed to fulfill at least one of these needs.

SUMMARY OF INVENTION

The present invention in one embodiment is a network controller for a television delivery system. The network controller is the central component that provides monitoring and control of set top terminals in a television delivery system. The network controller is a key component of a digital cable television delivery system. The network controller of the preferred embodiment performs all its cable network monitoring and control of set top terminals within the cable headend. The cable headend receives and processes digitally compressed program signals before the signals are relayed to each set top terminal. Each cable headend site is equipped with multiple satellite receiver dishes and a signal processor.

As an intermediary between the set top terminals and the program delivery system's operations center (or other

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remote site), the cable headend relies on the network controller to perform key cable system operations. In particular, the network controller accommodates regional programming needs by working with other cable headend components. The network controller also performs the system control functions for the cable system.

The primary function of the network controller is to manage the configuration of set top terminals and process signals received from the set top terminals. In the preferred embodiment, the network controller monitors, among other things, automatic poll-back responses from the set top terminals remotely located at each subscribers' home. The polling and automatic report-back cycle occurs frequently enough to allow the network controller to maintain accurate account and billing information as well as monitor authorized channel access.

In the simplest embodiment, information to be sent to the network controller will be stored in RAM within each subscriber's set top terminal and will be retrieved only upon polling by the network controller. Retrieval may, for example, occur on a daily, weekly or monthly basis. The network controller allows the system to maintain complete information on all programs watched using a particular set top terminal.

The network controller is also able to respond to the immediate needs of a set top terminal, or a group of set top terminals. The network controller can modify a program

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signal received from the program delivery system's operations center before the program signal is transmitted to the set top terminal. Therefore, the network controller enables the delivery system to adapt to the specific requirements of individual set top terminals when information on these requirements cannot be provided to the operations center in advance. In other words, the network controller is able to perform "on the fly programming" changes. With this capability, the network controller can handle sophisticated local programming needs such as interactive television services, split screen video, and selection of different foreign languages for the same video. In addition, the network controller controls and monitors all compressors and decompressors in the system.

The network controller makes use of a number of software routines that assist the network controller to perform its major functions. One of the major routines assists the network controller to modify the program control information so that changes and additions in programming and advertisements can be accommodated. Such changes and additions include set top terminal access authorizations and deauthorizations.

A set top terminal data gathering routine allows the network controller to schedule and perform polling of all set top terminals operating in the system. The software also provides the network controller with a means of

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processing status reports received from set top terminals in response to polling requests.

A video targeting routine makes use of a viewer's demographic information and viewing habits to determine those advertisements that are of most interest to that particular viewer. In so doing, the routine generates packages of advertisements targeted towards each viewer.

Finally, an additional routine correlates the programs accessed with pricing information to generate billing reports that can be sent to a given set top terminal over the cable distribution network. Aside from this routine, the network controller accommodates other methods of billing and account maintenance, such as through the use of remote billing sites.

The present invention is not only able to operate in the digital environment but also introduces many new features to television program delivery and cable headend control.

It would be desirable for the present invention to provide a network controller for a television delivery system.

It would also be desirable to provide a network controllerr for a digital cable headend used in a cable television delivery system.

It would also be desirable to provide certain needed components of a network controller for a digital cable headend used in a cable television delivery system.

It would be desirable to provide a versatile network controller for a cable headend.

It would be desirable to provide a network controller for use in a cable headend that is capable of operating in both the digital and analog environment.

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It would be desirable to provide a network controller capable of controlling multiple video/audio program signals received by a cable headend.

It would be desirable to provide a network controller that can control the routing of both analog and digital video/audio program signals from cable headend to viewer homes.

It would be desirable to provide a network controller component for a cable headend that controls the combining the digital video/audio signals.

It would be desirable to provide a network controller that creates tiered programming by combining various digital video/audio signals.

It would be desirable to provide a network controller for a cable headend that accommodates different bandwidth availability between cable headend and certain viewer homes.

It would be desirable to provide a network controller capable of modifying program control information received from an external source.

It is an object of the invention to provide a method, apparatus and/or network controller capable of targeting specific video/audio to specific viewers.

It is an object of the invention to provide a method , apparatus and/or network controller capable of targeting television commercials to specific consumers and viewers.

It is an object of the invention to provide a method, apparatus and/or network controller capable of managing account and billing information.

These and other objects and advantages of the invention will become apparent to those skilled in the art upon review of the following description, the attached drawings and appended claims.

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DESCRIPTION OF THE DRAWINGS

Figure 1 is a diagram of athe primary components of the television delivery system.

Figure 2 is an overview of the television delivery system operations.

Figure 3 is a schematic of the operation of the primary components of the system.

Figure 4 is a diagram of the primary components of the cable headend.

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Figure 5 is a diagram of the cable headend showing the primary components of the network controller.

Figure 6a is a schematic of a basic cable headend having network controller components.

Figure 6b is a schematic of an alternative embodiment of Figure 6a.

Figure 7 is a detailed diagram of the components of the cable headend.

Figure 8a is a drawing of a broadcast television menu screen to be displayed on a set top terminal.

Figure 8b is a drawing of a hit movie menu screen to be displayed on a set top terminal.

Figure 8c is a drawing of a hit movie description menu screen to be displayed on a set top terminal.

Figure 9a is a diagram for out-of-band two-way data transmission for a digital/analog headend.

Figure 9b is a diagram for in-band two-way data transmission for a digital/analog headend.

Figure 10a is a diagram of the polling request message format.

Figure 10b is a diagram of the polling response message format with an expanded view of the programs accessed block field.

Figure 11 is a diagram of the network controller CPU and its relational components.

Figure 12 is diagram of the network control database structure.

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Figure 13 is a diagram of the relationship between the major software routines.

Figure 14 is a block diagram of the software flow chart for the Modifying PCI routine.

Figure 15 is a block diagram of the software flow chart for the Polling Cycle routine.

Figure 16 is a diagram of a sample programs watched matrix.

Figure 17 is a block diagram of the software flow chart for the Basic Advertisement Targeting routine.

Figure 18 is a block diagram of the subroutine flow chart for processing programs watched matrices through correlation algorithms.

Figure 19 is a diagram of the subroutine flow chart for determining final groupings of set top terminals.

Figure 20a is a diagram showing a sample assignment of advertising channels to set top terminal groups watching particular categories of programs.

Figure 20b is a diagram assigning available bandwidth for multiple advertising channels.

Figure 21 is a diagram of the software flow chart for an alternative to the Basic Advertisement Targeting routine.

Figure 22 is a diagram of the software flow chart for the Account/Billing routine.

Figure 23 is a diagram of an embodiment that uses remote statistical and billing sites.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A. Television Program Delivery System Description

1. Introduction

Figure 1 shows the present invention as part of an expanded cable television program delivery system 200 that dramatically increases programming capacity using compressed transmission of television program signals. Developments in digital bandwidth compression technology now allow much greater throughput of television program signals over existing or slightly modified transmission media. The program delivery system 200 shown provides subscribers with a user friendly interface to operate and exploit a six-fold or more increase in current program delivery capability.

Subscribers are able to access an expanded television program package and view selected programs through a menu-driven access scheme that allows each subscriber to select individual programs by sequencing a series of menus. The menus are sequenced by the subscriber using simple alpha-numeric and iconic character access or moving a cursor or highlight bar on the TV screen to access desired programs by simply pressing a single button, rather than recalling from memory and pressing the actual two or more digit numeric number assigned to a selection. Thus, with the press of a single button, the subscriber can advance from one menu to the next. In this fashion, the subscriber

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can sequence the menus and select a program from any given menu. The programs are grouped by category so that similar program offerings are found on the same menu.

2. Major System Components

In its most basic form, the system uses a program delivery system 200 in conjunction with a conventional concatenated cable television system 210. The program delivery system 200 generally includes (i) at least one operations center 202, where program packaging and control information are created and then assembled in the form of digital data, (ii) a digital compression system, where the digital data is compressed, combined/multiplexed, encoded, and mapped into digital signals for satellite transmission to the cable headend 208, and (iii) a set of in-home decompressors. The program delivery system 200 transports the digital signals to the cable headend 208 where the signals are transmitted through a concatenated cable television system 210. Within the cable headend 208, the received signals may be decoded, demultiplexed, managed by a local central distribution and switching mechanism, combined and then transmitted to the set top terminal 220 located in each subscriber's home over the cable system 210. Although concatenated cable systems 210 are the most prevalent transmission media to the home, telephone lines, cellular networks, fiberoptics, Personal Communication Networks and similar technology for

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transmitting to the home can be used interchangeably with this program delivery system 200.

The delivery system 200 has a reception region 207 with an in-home decompression capability. This capability is performed by a decompressor housed within a set top terminal 220 in each subscriber's home. The decompressor remains transparent from the subscriber's point of view and allows any of the compressed signals to be demultiplexed and individually extracted from the composite data stream and then individually decompressed upon selection by the subscriber. The decompressed video signals are converted into analog signals for television display. Such analog signals include NTSC formatted signals for use by a standard television. Control signals are likewise extracted and decompressed and then either executed immediately or placed in local storage such as a RAM. Multiple sets of decompression hardware may be used to decompress video and control signals. The set top terminal 220 may then overlay or combine different signals to form the desired display on the subscriber's television. Graphics on video or picture-on-picture are examples of such a display.

Although a single digital compression standard (e.g., MPEG) may be used for both the program delivery system 200 and the concatenated cable system 210, the compression technique used may differ between the two systems. When the compression standards differ between the two media, the signals received by the cable headend

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208 must be decompressed before transmission from the headend 200 to the set top terminals 220. Subsequently, the cable headend 208 must recompress and transmit the signals to the set top terminal 220, which would then decompress the signals using a specific decompression algorithm.

The video signals and program control signals received by the set top terminal 220 correspond to specific television programs and menu selections that each subscriber may access through a subscriber interface. The subscriber interface is a device with buttons located on the set top terminal 220 or on a portable remote control 900. In the preferred system embodiment, the subscriber interface is a combined alpha-character, numeric and iconic remote control device 900, which provides direct or menu-driven program access. The preferred subscriber interface also contains cursor movement and go buttons as well as alpha, numeric and iconic buttons. This subscriber interface and menu arrangement enables the subscriber to sequence through menus by choosing from among several menu options that are displayed on the television screen. In addition, a user may bypass several menu screens and immediately choose a program by selecting the appropriate alpha-character, numeric or iconic combinations on the subscriber interface. In the preferred embodiment, the set top terminal 220 generates the menus that are displayed on the television by creating arrays of particular menu templates,

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and the set top terminal 220 displays a specific menu or submenu option for each available video signal.

3. Operations Center and Digital Compression System

The operations center 202 performs two primary services, packaging television programs and generating the program control information signal. At the operations center 202, television programs are received from external program sources in both analog and digital form. Figure 2 shows an embodiment of the operations center receiving signals from various external sources 212. Examples of the external program sources are sporting events, children's programs, specialty channels, news or any other program source that can provide audio or visual signals. Once the programs are received from the external program sources, the operations center 202 digitizes (and preferably compresses) any program signals received in analog form. The operations center 202 may also maintain an internal storage of programs. The internally stored programs may be in analog or digital form and stored on permanent or volatile memory sources, including magnetic tape or RAM. Subsequent to receiving programming, the operations center 202 packages the programs into the groups and categories which provide the optimal marketing of the programs to subscribers. For example, the operations center 202 may package the same programs into different categories and menus for weekday, prime-time viewing and Saturday

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afternoon viewing. Also, the operations center 202 packages the television programs in a manner that enables both the various menus to easily represent the programs and the subscribers to easily access the programs through the menus.

The packaging of the digital signals is typically performed at the operations center 202 by computer assisted packaging equipment (CAP). The CAP system normally includes at least one computer monitor, keyboard, mouse, and standard video editing equipment. A programmer packages the signals by entering certain information into the CAP. This information includes the date, time slot, and program category of the various programs. The programmer and the CAP utilize demographic data and ratings in performing the packaging tasks. After the programmer selects the various programs from a pool of available programs and inputs the requisite information, the programmer, with assistance from the CAP, can select the price and allocate transponder space for the various programs. After the process is complete, the CAP displays draft menus or program schedules that correspond to the entries of the programmer. The CAP may also graphically display allocation of transponder space. The programmer may edit the menus and transponder allocation several times until satisfied with the programming schedule. During the editing, the programmer may direct the exact

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location of any program name on a menu with simple commands to the CAP.

The packaging process also accounts for any groupings by satellite transponder which are necessary. The operations center 202 may send different groups of programs to different cable headends 208 and/or set top terminals 220. One way the operations center 202 may accomplish this task is to send different program packages to each transponder. Each transponder, or set of transponders, then relays a specific program package to specific cable headends 208 and/or set top terminals 220. The allocation of transponder space is an important task performed by the operations center 202.

The operations center 202 may also "insert" directions for filling local available program time in the packaged signal to enable local cable and television companies to fill the program time with local advertising and/or local programming. Consequently, the local cable headends 208 are not constrained to show only programs transmitted from the operations center 202. New set top converters will incorporate both digital and analog channels. Therefore, the cable headend 208 may combine analog signals with the digital signals prior to transmitting the program signals to the set top terminals 220.

After the CAP packages the programs, it creates a program control information signal to be delivered with the program package to the cable headend 208 and/or set top

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terminal 220. The program control information signal contains a description of the contents of the program package, commands to be sent to the cable headend 208 and/or set top terminal 220, and other information relevant to the signal transmission.

In addition to packaging the signal, the operations center 202 employs digital compression techniques to increase existing satellite transponder capacity by at least a 4:1 ratio, resulting in a four-fold increase in program delivery capability. A number of digital compression algorithms currently exist which can achieve the resultant increase in capacity and improved signal quality desired for the system. The algorithms generally use one or more of three basic digital compression techniques: (1) within-frame (intraframe) compression, (2) frame-to-frame (interframe) compression, and (3) within carrier compression. Specifically, in the preferred embodiment, the MPEG 2 compression method is used. After digital compression, the signals are combined (multiplexed) and encoded. The combined signal is subsequently transmitted to various uplink sites 204.

There may be a single uplink site 204 or multiple uplink sites (represented by 204', shown in phantom in Figure 1) for each operation center 202. The uplink sites 204 may either be located in the same geographical place or may be located remotely from the operations center 202. Once the composite signal is transmitted to the uplink sites

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204, the signal may be multiplexed with other signals, modulated, upconverted and amplified for transmission over satellite. Multiple cable headends 208 may receive such transmissions.

In addition to multiple uplinks, the delivery system 200 may also contain multiple operations centers. The preferred method for using multiple operations centers is to designate one of the operations centers as a master operations center and to designate the remaining operations centers as slave operations centers. In this configuration, the master operations center coordinates various functions among the slave operations centers such as synchronization of simultaneous transmissions and distributes the operations workload efficiently.

4. Cable Headend

After the operations center 202 has compressed and encoded the program signals and transmitted the signals to the satellite, the cable headend 208 receives and further processes the signals before they are relayed to each set top terminal 220. Each cable headend site is generally equipped with multiple satellite receiver dishes. Each dish is capable of handling multiple transponder signals from a single satellite and sometimes from multiple satellites.

As an intermediary between the set top terminals 220 and the operations center 202 (or other remote site), the cable headend 208 performs two primary functions. First, the cable headend 208 acts as a distribution center, or

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signal processor, by relaying the program signal to the set top terminal 220 in each subscriber's home. In addition, the cable headend 208 acts as a network controller 214 by receiving information from each set top terminal 220 and passing such information on to an information gathering site such as the operations center 202.

Figure 3 shows an embodiment where the cable headend 208 and the subscriber's home are linked by certain communications media 216. In this particular embodiment, analog signals, digitally compressed signals, other digital signals and up-stream/interactivity signals are sent and received over the media 216. The cable headend 208 provides such signaling capabilities in its dual roles as a signal processor 209 and network controller 214.

As a signal processor 209, the cable headend 208 prepares the program signals that are received by the cable headend 208 for transmission to each set top terminal 220. In the preferred system, the signal processor 209 re-routes or demultiplexes and recombines the signals and digital information received from the operations center 202 and allocates different portions of the signal to different frequency ranges. Cable headends 208 which offer different subscribers different program offerings may allocate the program signals from the operations center 202 in various manners to accommodate different viewers. The signal processor 209 may also incorporate local programming and/or local advertisements into the program signal and

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forward the revised signal to the set top terminals 220. To accommodate this local programming availability, the signal processor 209 must combine the local signal in digital or analog form with the operations center program signals. If the local cable system uses a compression standard that is different than the one used by the operations center 202, the signal processor 209 must also decompress and recompress incoming signals so they may be properly formatted for transmission to the set top terminals 220. This process becomes less important as standards develop (i.e., MPEG 2). In addition, the signal processor 209 performs any necessary signal decryption and/or encryption.

As a network controller 214, the cable headend 208 performs the system control functions for the system. The primary function of the network controller 214 is to manage the configuration of the set top terminals 220 and process signals received from the set top terminals 220. In the preferred embodiment, the network controller 214 monitors, among other things, automatic poll-back responses from the set top terminals 220 remotely located at each subscribers' home. The polling and automatic report-back cycle occurs frequently enough to allow the network controller 214 to maintain accurate account and billing information as well as monitor authorized channel access. In the simplest embodiment, information to be sent to the network controller 214 will be stored in RAM within

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each subscriber's set top terminal 220 and will be retrieved only upon polling by the network controller 214. Retrieval may, for example, occur on a daily, weekly or monthly basis. The network controller 214 allows the system to maintain complete information on all programs watched using a particular set top terminal 220.

The network controller 214 is also able to respond to the immediate needs of a set top terminal 220 by modifying a program control information signal received from the operations center 202. Therefore, the network controller 214 enables the delivery system to adapt to the specific requirements of individual set top terminals 220 when the requirements cannot be provided to the operations center 202 in advance. In other words, the network controller 214 is able to perform "on the fly programming" changes. With this capability, the network controller 214 can handle sophisticated local programming needs such as, for example, interactive television services, split screen video, and selection of different foreign languages for the same video. In addition, the network controller 214 controls and monitors all compressors and decompressors in the system.

The delivery system 200 and digital compression of the preferred embodiment provides a one-way path from the operations center 202 to the cable headend 206. Status and billing information is sent from the set top terminal 220 to the network controller 214 at the cable headend 206 and not directly to the operations center 202. Thus, program

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monitoring and selection control will take place only at the cable headend 208 by the local cable company and its decentralized network controllers 214 (i.e., decentralized relative to the operations center 202, which is central to the program delivery system 200). The local cable company will in turn be in communication with the operations center 202 or a regional control center (not shown) which accumulates return data from the set top terminal 220 for statistical or billing purposes. In alternative system embodiments, the operations center 202 and the statistical and billing sites are collocated. Further, telephone lines with modems are used to transfer information from the set top terminal 220 to the statistical and billing sites.

5. Set Top Terminal

The set top terminal 220 is the portion of the delivery system 200 that resides in the home of a subscriber. The set top terminal 220 is usually located above or below the subscriber's television, but it may be placed anywhere in or near the subscriber's home as long as it is within the range of the subscriber's remote control device 900. In some aspects, the set top terminal 220 may resemble converter boxes already used by many cable systems. For instance, each set top terminal 220 may include a variety of error detection, decryption, and coding techniques such as anti-taping encoding. However, it will become apparent from the discussion below that the set top terminal 220 is able to

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perform many functions that an ordinary converter box cannot perform.

The set top terminal 220 has a plurality of input and output ports to enable it to communicate with other local and remote devices. The set top terminal 220 has an input port that receives information from the cable headend 208. In addition, the unit has at least two output ports which provide communications from the set top terminal 220 to a television and a VCR. Certain menu selections may cause the set top terminal 220 to send control signals directly to the VCR to automatically program or operate the VCR. Also, the set top terminal 220 contains a phone jack which can be used for maintenance, trouble shooting, reprogramming and additional customer features. The set top terminal 220 may also contain stereo/audio output terminals and a satellite dish input port.

Functionally, the set top terminal 220 is the last component in the delivery system chain. The set top terminal 220 receives compressed program and control signals from the cable headend 208 (or, in some cases, directly from the operations center 202). After the set top terminal 220 receives the individually compressed program and control signals, the signals are demultiplexed, decompressed, converted to analog signals (if necessary) and either placed in local storage (from which the menu template may be created), executed immediately, or sent directly to the television screen.

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After processing certain signals received from the cable headend 208, the set top terminal 220 is able to store menu templates for creating menus that are displayed on a subscriber's television by using an array of menu templates. Before a menu can be constructed, menu templates must be created and sent to the set top terminal 220 for storage. A microprocessor uses the control signals received from the operations center 202 or cable headend 208 to generate the menu templates for storage. Each menu template may be stored in volatile memory in the set top terminal 220. When the set top terminal receives template information it demultiplexes the program control signals received from the cable headend 208 into four primary parts: video, graphics, program logic and text. Each menu template represents a different portion of a whole menu, such as a menu background, television logo, cursor highlight overlay, or other miscellaneous components needed to build a menu. The menu templates may be deleted or altered using control signals received from the operations center 202 or cable headend 208.

Once the menu templates have been stored in memory, the set top terminal 220 can generate the appropriate menus. In the preferred embodiment, the basic menu format information is stored in memory located within the set top terminal 220 so that the microprocessor may locally access the information from the set top terminal instead of from an incoming signal. The microprocessor next generates the

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appropriate menus from the menu templates and the other menu information stored in memory. The set top terminal 220 then displays specific menus on the subscriber's television screen that correspond to the inputs the subscriber selects.

If the subscriber selects a specific program from a menu, the set top terminal 220 determines on which channel the program is being shown, demultiplexes and extracts the single channel transmitted from the cable headend 208. The set top terminal 220 then decompresses the channel and, if necessary, converts the program signal to an analog NTSC signal to enable the subscriber to view the selected program. The set top terminal 220 can be equipped to decompress more than one program signal, but this would unnecessarily add to the cost of the unit since a subscriber will generally only view one program at a time. However, two or three decompressors may be desirable to provide picture-on-picture capability, control signal decompression, enhanced channel switching or like features.

In addition to menu information, the set top terminal 220 may also store text transmitted from the cable headend 208 or the operations center 202. The text may inform the subscriber about upcoming events, billing and account status, new subscriptions, or other relevant information. The text will be stored in an appropriate memory location depending on the frequency and the duration of the use of the textual message.

Also, optional upgrades are available to enhance the performance of a subscriber's set top terminal 220. These upgrades may consist of a cartridge or computer card (not shown) that is inserted into an expansion slot in the set top terminal 220 or may consist of a feature offered by the cable headend 208 or operations center 202 to which the user may subscribe. Available upgrades may include on line data base services, interactive multi-media services, access to digital radio channels, and other services.

In the simplest embodiment, available converter boxes such as those manufactured by General Instruments or Scientific Atlanta, may be modified and upgraded to perform the functions of a set top terminal 220. The preferred upgrade is a circuit card with a microprocessor which is electronically connected to or inserted into the converter box.

6. Remote Control Device

The primary conduit for communication between the subscriber and the set top terminal 220 is through the subscriber interface, preferably a remote control device 900. Through this interface, the subscriber may select desired programming through the system's menu-driven scheme or by directly accessing a specific channel by entering the actual channel number. Using the interface, the subscriber can navigate through a series of informative program selection menus. By using menu-driven, iconic or alpha-character access, the subscriber can access desired

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programs by simply pressing a single button rather than recalling from memory and pressing the actual channel number to make a selection. The subscriber can access regular broadcast and basic cable television stations by using either the numeric keys on the remote control 900 (pressing the corresponding channel number), or one of the menu icon selection options.

In addition to enabling the subscriber to easily interact with the cable system 200, the physical characteristics of the subscriber interface 900 should also add to the user friendliness of the system. The remote control 900 should easily fit in the palm of the user's hand. The buttons of the preferred remote control 900 contain pictorial symbols that are easily identifiable by the subscriber. Also, buttons that perform similar functions may be color coordinated and consist of distinguishing textures to increase the user friendliness of the system.

7. Menu-Driven Program Selection

The menu-driven scheme provides the subscriber with one-step access to all major menus, ranging from hit movies to sport specials to specialty programs. From any of the major menus, the subscriber can in turn access submenus and minor menus by cursor or alpha-character access.

There are two different types of menus utilized by the preferred embodiment, the Program Selection menus and the During Program menus. The first series of menus, Program

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Selection menus, consists of an Introductory, a Home, Major menus, and Submenus. The second series of menus, During Program menus, consists of two primary types, Hidden menus and the Program Overlay menus.

Immediately after the subscriber turns on the set top terminal 220, the Introductory menu welcomes the subscriber to the system. The Introductory menu may display important announcements from the local cable franchise, advertisements from the cable provider, or other types of messages. In addition, the Introductory menu can inform the subscriber if the cable headend 208 has sent a personal message to the subscriber's particular set top terminal 220.

After the Introductory menu has been displayed the subscriber may advance to the next level of menus, namely the Home menu. In the preferred embodiment, after a certain period of time, the cable system will advance the subscriber by default to the Home menu. From the Home menu, the subscriber is able to access all of the programming options. The subscriber may either select a program directly by entering the appropriate channel number from the remote control 900, or the subscriber may sequence through incremental levels of menu options starting from the Home menu. The Home menu lists categories that correspond to the first level of menus called Major menus.

If the subscriber chooses to sequence through subsequent menus, the subscriber will be forwarded to the Major menu that corresponds to the chosen category from the Home menu. The Major menus further refine a subscriber's search and help guide the subscriber to the selection of his choice.

From the Major menus, the subscriber may access several submenus. From each submenu, the subscriber may access other submenus until the subscriber finds a desired television program. Similar to the Major menu, each successive level of Submenus further refines the subscriber's search. The system also enables the subscriber to skip certain menus or submenus and directly access a specific menu or television program by entering the appropriate commands on the remote control 900.

The During program menus (including Hidden Menus and Program Overlay Menus) are displayed by the set top terminal 220 only after the subscriber has selected a television program. In order to avoid disturbing the subscriber, the set top terminal 220 does not display the Hidden Menus until the subscriber selects the appropriate option to display a Hidden Menu. The Hidden Menus contain options that are relevant to the program selected by the viewer. For example, a Hidden Menu may contain options that enable a subscriber to enter an interactive mode or escape from the selected program.

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Program Overlay Menus are similar to Hidden Menus because they occur during a program and are related to the program being viewed. However, the Program Overlay Menus are displayed concurrently with the program selected by the subscriber. Most Program Overlay Menus are small enough on the screen to allow the subscriber to continue viewing the selected program comfortably.

B. Network Controller Description

1. Monitoring and Control of Set Top Terminals

Figure 4 shows the network controller 214 of the present invention as part of a digital cable headend 208 operating in an expanded cable television program delivery system, indicated generally at 200. The network controller 214 monitors program selections at subscribers' homes, maintains accurate account and billing information and authorizes both subscriber channel access and particular set top terminals 220 to operate in the system.

The network controller 214 performs its monitoring and control capability by working with other system components housed, in part, within the cable headend 208. These cable headend components include a cable headend receiver 203 and a signal processor 209. As shown in the Figure 4, digital RF program signals 205 are received and processed for further distribution to a subscriber's home through a set top terminal 220. The program signals 205 are digitally compressed and multiplexed signals that may

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be processed at the cable headend 208 or simply passed through to the cable distribution network. In the embodiment shown in Figure 4, the program signals 205 are received by the cable headend receiver 203 and transmitted to the signal processor 209.

The signal processor 209 prepares the program signals 205 that are received by the cable headend 208 for transmission to each set top terminal 220. In the preferred system, the network controller 214 supervises and, in some cases, instructs the signal processor 209 in routing the signals to subscribers. In this way, the network controller 214 and signal processor 209 work with one another to perform basic control functions in the cable television system 200. Typically, this work is accomplished by the transfer of control information, represented at 211, between the network controller 214 and the signal processor 209.

Although it is preferred that the signal processor 209 and network controller 214 be co-located at the cable headend 208, the network controller 214 may be remotely located from the cable headend 208, as long as it remains in communication with the signal processor 209 in order to exchange control information 211.

In many instances, the program signals 205 received from the operations center 202 must be modified prior to being sent to the set top terminals 220. These modifications to the program control information 211 are

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made by the network controller 214 working in conjunction with the signal processor 209 to send a set top terminal control information stream (STTCIS). From the signal processor 209, the network controller 214 receives the program signals 205, which include cable franchise specific information added by the operations center 202. The network controller 214 modifies the program signals 205, if necessary, and communicates the new information back to the signal processor 209. The signal processor 209 then forwards the information to the set top terminal 220 in the form of the STTCIS, arrow 215. In most instances, the network controller 214 will modify the program signals 205 by adding additional information; however, the program signals 205 can be passed through the cable headend 208 to the set top terminal 220 without any modification.

The signal processor 209 and network controller 214 are both capable of handling the addition of simple local availabilities (e.g., local advertisements) into the signal sent to the set top terminal 220. The network controller 214 is also capable of handling more sophisticated local programming needs such as targeting video commercials, infomercials, interactive programming and certain data services. The network controller 214 receives all electronic signals sent by the set top terminal 220, including those sent in response to interactive service requests and some data service requests. The network

controller 214 coordinates the necessary switching and access to allow the subscriber to enjoy these services.

The network controller 214 has the capability of performing "on the fly programming" changes, assisting in (i) masking portions of subscriber's television screens (split screen video), (ii) selecting different audio signals for the same video (foreign languages), and (iii) interactive features. In addition, the network controller can create programming changes. For last minute changes to programming (such as for a local emergency or important regional events), an operator using the network controller 214 can modify the program signals 209 "on the fly" and change menus available to the subscriber. This accommodates short notice changes to program packaging that cannot be handled by the operations center 202 in advance.

In order to accommodate split screen techniques for promo and demo video (which will be described later), undesired video portions of the television or menu screen may be masked. The network controller 214 can send the necessary control information to inform the set top terminal 220 to mask portions of a specific channel's video. For example, a video channel with a split screen showing four separate videos would require a three-fourths mask to focus the viewer on the featured video clip.

Tiered programming allows different users to view different video even though they are "tuned" to the same

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channel. For example, the network controller 214 may know the demographics of its subscribers through a database generated, in part, from prior subscriber choices, an interactive selection, or other means. Using the demographics information, the network controller 214 may target commercials to the correct audience by showing different commercials to subscriber's with different demographics. Information on programs watched may also be used to target commercials. Even though subscribers will believe they are "tuned" to one channel, they will be switched to a different channel for the tiered video and targeted commercial. Alternatively, individual subscribers may be offered a menu with the option of several commercials from which to choose.

To accommodate foreign speaking subscribers, multiple audio channels for television programming may be provided. The subscriber may be shown menus of programs available in the subscriber's native language. The function of choosing the correct audio to correspond to the selected language may be handled by either the set top terminal 220 or the network controller 214 depending upon the configuration. Local programming in several languages or additional audio channels for a foreign language translation of a popular television program may be provided by the network controller 214. Using a picture-on-picture feature, sign language may be similarly made available to certain set top terminals 220 for the deaf. The sign language video

may be transmitted to the set top terminal 220 on a separate channel. Also, a text overlay for the deaf may be easily produced on the lower part of the screen. The control signals for producing the text overlay may be handled by the network controller 214.

In other embodiments, the network controller 214 can act as a central computer and provide intra-set top terminal interactive games, inter-set top terminal interactive games, computer bulletin board type services, message services (Electronic mail), etc. For example, a subscriber may play war games with six of his (anonymous) fellow subscribers each in their own home each operating a separate tank. The network controller 214 gathers the players using set top terminal 220 communications and acts as the referee. The network controller software "plays" the game and generates the video control signals to be transmitted to the set top terminals 220. From the video control signals, the set top terminal generates a view of the playing field and shows movement of the tanks. Using a similar method, a bulletin board or message system can be set up to discuss a particular program such as "Twin Peaks Whodunit" for enthusiasts with set top terminals 220.

2. Monitoring and Control of Cable Headend Signal Processor

Figure 5 shows the network controller's major components and how these components relate with other components of the cable system 200. The network

controller's internal components include a network controller CPU 224, databases 226, control receiver 228, local memory 230 and telephone modem 232. The network controller's CPU 224 and databases 226 may be accessed through an operator control station, which may include peripherals such as a computer workstation, CRT display, and printer, represented by the workstation 234.

Information required to operate the network controller 214 will be stored in databases 226 and local memory 230 (e.g., either in RAM, ROM, or magnetic or optical Read/Write devices) at the cable headend 208 as well as in memory (RAM and/or ROM) within each subscriber's set top terminal 220. In the preferred embodiment, two-way communications between the network controller 214 and set top terminal 220 will occur over cable lines. Many other methods of communication, including those which do not require cables or wires, may be used with the present invention. Using two-way communication, interactive television programming can be accommodated through the network controller 214. In addition, the preferred network controller 214 will be able to access set top terminals 220 via phone lines for trouble shooting, special features or sophisticated reprogramming.

The network controller CPU 224 controls the interface, depicted at 211, between the network controller 214 and the signal processor 209. This interface 211 allows control information to flow or transfer between the

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two cable headend 208 components. Standard RS-232 or RS-422 links, an IEEE-488 bus or other interface media may be used. During standard operation, program control information is passed through this interface 211 to the network controller CPU 224 from the signal processor 209 (i.e., the program control information having been sent to the signal processor 209 over satellite from the operations center 202 with the RF program signals 205, not shown in Figure 5). The network controller CPU 224 processes the program control information based on data stored in the network control databases. This processing includes modifying the program control information to accommodate regional programming needs.

After processing, the network controller CPU 224 passes the program control information, including any modifications, back to the signal processor 209 for distribution over the cable system 200, via the cable distribution network 236. In this fashion, the network controller 214 provides programming and network control instructions to the set top terminals 220 through the signal processor 209.

The processing of program control information by the network controller CPU 224 can also make use of any data received by the network controller's control receiver 228. The control receiver 228 is a microprocessor-based device that receives "status reports" directly from the set top terminals 220. The status reports received by the control

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