(54) Title: ELECTRONIC WARRANTY CLAIM PROCESSING METHOD AND SYSTEM

(57) Abstract: A computer-implemented method and system for an electronic warranty claim processing (10), including receiving work order data on a client computer system (16) via an input device, generating claim data based on the work order data within the client computer system (16), transmitting the claim data to a server system (18) in communication with the client computer system (16), and receiving from the server system (18) in communication with the client computer system (16) at least some of the transmitted claim data and settlement data based on the transmitted claim data.
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
Description

Electronic Warranty Claim Processing Method and System

5 Technical Field
The present invention relates to warranty claim processing systems, and more particularly, the present invention relates to an electronic warranty claim processing method and system on the Internet.

10 Background Art
Traditionally, warranty claim processing and submission has been a slow, tedious, and redundant process as between customers, dealers, and manufacturers. Specifically, when a customer brought a defective item to a dealer for repair under a manufacturer's warranty, a dealer creating a claim had to either have a dedicated network connection to a manufacturer or would have to send a paper claim by traditional mail service to the manufacturer. A dedicated network connection is a very costly proposition for a dealer both in hardware, phone lines, network terminals, administrative staff, maintenance, security agreements, help desks, administrative staff, and so forth. If a dealer chose to use paper claims, warranty claim payments could sometimes take months to complete. For example, suppose a dealer branch store sends a paper claim to the main dealer store. The main dealer store would batch the paper claims and mail them to a
manufacturer warranty administrator. The manufacturer warranty administrator would batch the paper claims from several dealers and mail them to the manufacturer’s warranty support group for data entry. The claims would then be processed and paid, provided all the warranty claim information was complete and in proper form. If errors were present, the claim would be sent back to the dealer and the cycle repeated. Moreover, during the entire warranty claim processing period, the dealer would know little about actual receipt, processing, or errors regarding the claim. Consequently, a system and method is needed that provides for warranty claim processing and tracking in a user-friendly, fast, accurate, and cost-efficient manner.

Disclosure of the Invention

In one aspect of this invention, a computer-implemented method for an electronic warranty claim processing system is disclosed. The method includes receiving work order data on a client computer system via an input device, generating claim data based on the work order data within the client computer system, transmitting the claim data to a server system in communication with the client computer system, and receiving from the server system in communication with the client computer system at least some of the transmitted claim data and settlement data based on the transmitted claim data.
In another aspect of this invention, a computer system for an electronic warranty claim processing is disclosed. The system includes a client computer system for creating claim data based on work order data and sending claim data and receiving settlement data, and a server system in communication with the client computer system for receiving the claim data from the client computer system, processing the claim data, storing the claim data in a database supported by the server system, creating settlement data based on the processed claim data, and delivering at least some of the processed claim data and the settlement data from the server system to the client computer system.

**Brief Description of the Drawings**

For a better understanding of the present invention, reference may be made to the accompanying drawing in which:

**FIG. 1** illustrates a diagrammatic representation of the several dealer client computer systems connected to a manufacturer server system via the Internet.

**Best Mode for Carrying Out the Invention**

An electronic warranty claim processing system and method is described. In the following detailed description numerous specific details are set forth in order to provide a thorough understanding of the invention. However, it will be understood by those
skilled in the art that the present invention may be practiced without these specific details. For example, the invention is not limited in scope to any specific combination of hardware circuitry and software, software language, electronic communications network, or to any particular source for instructions executed by the computer system. In other instances, well-known methods, procedures, and components have not been described in detail so as not to obscure the present invention.

The electronic warranty claim processing system and method in accordance to the present invention is an electronic service, information, and claim processing service built from a combination of off-the-shelf hardware and software packages and custom software. It is intended to allow dealers to track work orders, claims, and settlements by allowing dealers to electronically import work orders, convert work orders into claims, and transmit these claims to a manufacturer as well as receive settlements and perform reporting on the dealer’s claim warranty business all via the Internet.

One aspect of the present invention includes a technique by which a dealer can import work orders and convert them into claims for transmission to a manufacturer in addition to being able to receive settlements from a manufacturer and processing of the claim via the Internet. More particularly, when a claim is actually submitted to the manufacturer, email or a hypertext link can take the dealer’s claim data
to the manufacturer’s server system for processing and archival. These and other aspects of the present invention will be described below in greater detail.

In one embodiment, the present invention is carried out in a computer system by a microprocessor executing sequences of instructions contained in a memory. More specifically, execution of the sequences of instructions causes the microprocessor to perform steps of the present invention, which are described below. The instructions may be loaded into RAM for execution by the microprocessor from a ROM or other storage device. Also, the instructions may be received by the computer system via a network from another computer system. In other embodiments, hardwired circuitry may be used in place of, or in combination with, software instructions to implement the present invention.

Referring now to FIG. 1, the electronic warranty claim processing system is generally indicated by numeral 10. There is a connection(s) 12 via the Internet 14 between a client computer system 16 and a server system 18, as shown in FIG. 1. The server system 18 is a multi-user, concurrent use system 20 and includes a database 22 with logic functions, processing, creating and storage, and importation and exportation of data capabilities. The client computer system 16 executes a software application, such as a web browser, which allows the client computer system 16 to access and send data to a server system 18. The client computer system 16
includes a bus, a microprocessor coupled with the bus for processing information, and a main memory, such as RAM or other dynamic storage device, coupled to the bus for storing information and instructions to be executed by the processor. The client computer system further includes ROM or other static storage device coupled to the bus for storing static information and instructions for the processor. A storage device, such as a magnetic disk or optical disk is also provided and coupled to the bus for storing information and instructions. The client computer system 16 also includes a communication device and various input/output devices, such as monitors, keyboards, pointing devices, or printers, both being coupled to the bus. The communication device provides the client computer system 16 with a connection to the Internet 14 and may be a device suitable for such purpose, such as a telephone modem or ISDN adapter. It is understood that other details regarding the client computer system 16 and architecture have been omitted so as to not obscure the present invention.

Merely as a nonlimiting example, this patent application refers to manufacturers, dealers, or customers. However, any of a wide variety of different entities may be utilized with this Invention. Referring again to FIG. 1, assume that a dealer wishes to create a claim order based on a work order and electronically submit that claim order to a manufacturer for processing and settlement via the Internet 14. The dealer’s computer is a client
computer system 16 which includes web browsing capabilities, as explained previously. The manufacturer’s computer is a server system 18. Suppose that a customer has an item under warranty and desires for the item to be repaired under the warranty by the dealer. Upon inspection, the dealer creates a work order on his client computer system 16 to fix the item under warranty. In the preferred embodiment, the warranty claim processing system imports the work order and converts the work order into a claim order using the previously entered work order data and/or click-on-data entered by the dealer relating to serial number, product type, warranty type, claim class, and currency code, as an illustrative example. It is understood that the click-on-data format eliminates data entry errors and simplifies claim creation thereby providing faster returns of settlements. Additionally, the Internet 14 connectivity between the dealer’s client computer system 16 and the manufacturer’s server system 18 allows the dealer to maintain current versions of the warranty claim processing system as well as product codes, dealer codes, claim codes, currency codes, etc. by downloading such warranty claim information and software from the manufacturer’s server system 18.

After completion of the claim data by the dealer, the client computer system 16 sends the claim data to the manufacturer’s server system 18 via the Internet 14 for processing of a settlement.

Specifically, a hypertext link or email takes the
dealer's claim data to the manufacturer's server system 18. The manufacturer's server system 18 then sends an acknowledgement back to the dealer's client computer system 16 and stores the claim data in a manufacturer's server system 18 supported database 22 and processes the data for settlement purposes. Claim data is stored to track claim trends for future engineering design and warranty purposes as well as for inventory and stock ordering purposes, for example. Once a settlement is made and approved by the manufacturer, the manufacturer's server system 18 then delivers a settlement notice and other payment data back to the dealer's client computer system 16 so payments to the dealer can be electronically facilitated by the manufacturer. It is further noted that the warranty claim processing system also allows the dealer's client computer system 16 to perform a limited amount of reporting of the dealer's claim warranty business. Accordingly, the warranty claim processing system provides a timely, accurate, efficient, user-friendly and cost-effective method for warranty claim processing.

**Industrial Applicability**

The present invention is advantageously applicable in utilizing the Internet as a convenient medium by which dealers and manufacturers can have immediate access to complete claim and settlement information along with the ability of the dealer to
electronically submit claims and receive settlements from a manufacturer.

While certain features of the invention have been illustrated as described herein, many modifications, changes and equivalents will now occur to those skilled in the art. It is, therefore, to be understood that the appended claims, are intended to cover all such modifications and changes as fall within the true spirit of the invention. It is also preferred that the present invention be limited not by the specific disclosure herein, but by the scope of the appended claims.

Other aspects, objects and advantages of the present invention can be obtained from a study of the drawings, the disclosure and the appended claims.
Claims

1. A computer-implemented method for an electronic warranty claim processing system (10), comprising:
   receiving work order data on a client computer system (16) via an input device;
   generating claim data based on said work order data within said client computer system (16);
   transmitting said claim data to a server system (18) in communication with said client computer system (16); and
   receiving from said server system (18) in communication with said client computer system (16) at least some of said transmitted claim data and settlement data based on said transmitted claim data.

2. The computer-implemented method of Claim 1, further including receiving from said server system (18) tracking of advancement of said work order data, said claim data, and said settlement data.

3. The computer-implemented method of Claim 1, further including directing electronic payment by said server system (18) to a bank account based on said settlement data.

4. The computer-implemented method of Claim 1, further including downloading warranty claim
information and software to said client computer system (16) from said server system (18).

5. The computer-implemented method of Claim 1, further including receiving from said server system (18) acknowledgement of said claim data receipt.

6. A computer-implemented method for an electronic warranty claim processing system (10), comprising:
   receiving claim data, based on work-order data, from a client computer system (16);
   processing at least a portion of said claim data within server system (18);
   storing said claim data in a database supported by said server system (18);
   creating settlement data within said server system (18) based on said processed claim data; and delivering at least some of said processed claim data and said settlement data from said server system (18) to said client computer system (16).

7. The computer-implemented method of Claim 6, further including tracking advancement of said work order data, said claim data, and said settlement data by said server system (18) and delivering to said client computer system (16).

8. The computer-implemented method of Claim 6, further including directing electronic payment by
said server system (18) to a bank account based on
said settlement data.

9. The computer-implemented method of Claim
6, further including uploading warranty claim
information and software to said client computer
system (16) from said server system (18).

10. The computer-implemented method of Claim
6, further including delivering to said client
computer system (16) acknowledgement of said claim
data receipt.

11. A computer system for an electronic
warranty claim processing (10), comprising:

a client computer system (16) for creating
claim data based on work order data and sending claim
data and receiving settlement data; and

a server system (18) in communication with
said client computer system (16) for receiving said
claim data from said client computer system (16),
processing said claim data, storing said claim data in
a database (22) supported by said server system (18),
creating settlement data based on said processed claim
data, and delivering at least some of said processed
claim data and said settlement data from said server
system (18) to said client computer system (16).

12. The computer system of Claim 11 (10),
wherein said server system (18) tracks advancement of
said work order data, said claim data, and said settlement data and delivers to said client computer system (16).

13. The computer system of Claim 11 (10), wherein said server system (18) directs payment to a bank account based on said settlement data.

14. The computer system of Claim 11 (10), wherein said client computer system (16) downloads warranty claim information and software from said server system (18).

15. The computer system of Claim 11 (10), wherein said server system (18) delivers to said client computer system (16) acknowledgment of said claim data receipt.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60
US CL : 705/4

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 705/4

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Proquest; Dialog; USPatent; Derwent; EPO

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
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<th>Category *</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tr>
<td>A</td>
<td>US 6,064,979 A (PERKOWSKI) 16 May 2000 (16.05.2000).</td>
<td>1-15</td>
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<tr>
<td>A</td>
<td>US 5,724,575 A (HOOVER, et al.) 03 March 1998 (03.03.1998).</td>
<td>1-15</td>
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Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

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Date of the actual completion of the international search
06 July 2001 (06.07.2001)

Date of mailing of the international search report
06 AUG 2001

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Form PCT/ISA/210 (second sheet) (July 1998)
C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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<tr>
<td>A</td>
<td>Freightliner Expands on Products and Customer Services, Fleet Equipment, April 1993 Vol. 19, No. 4, pages 6-12.</td>
<td>1-15</td>
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