Serial Number 09/349,356

Filing Date 1 July 1999

Inventor Robert C. Higgins

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DEPARTMENT OF THE NAVY
CODE 00CC
ARLINGTON VA 22217-5660

Attorney Docket No. 78930

AN INFORMATION SYSTEM FOR HANDLING CONTRACT DOCUMENTATION

STATEMENT OF GOVERNMENT INTEREST

The invention described herein may be manufactured and used by or for the government of the United States of America for governmental purposes without the payment of any royalties thereon or therefore.

BACKGROUND OF THE INVENTION

(1) Field of the Invention

The present invention relates to information systems and, more particularly, to information systems which provide for an automated approach for tracking and evaluating the execution of government contracts and their associated documentation.

(2) Description of the Prior Art

Information and data handling systems are well known and some of which are described in U.S. Patents 4,959,769; 5,182,705; 5,191,525; 5,623,653 and 5,666,490 none of which appears to be particularly suited to handle government contracts.

The handling of government contracts to ensure the correct performance thereof requires periodic, and sometimes tedious,

review of documentation submitted by contractors to government personnel. This documentation includes contract data requirement listings (CDRLs) like progress reports, deliverable status reports, financial summaries, material procurement itemizations; and, other submittals like public vouchers and certificates of performance which provide information about contractor labor hours and labor categories that are required for a particular reporting period. The processing of this documentation is commonly performed manually which includes the task of accepting and temporarily storing the contract submittals for a prescribed current period, retrieving the contractors' submittals from previous reporting periods for comparison purposes, and organizing all the documentation representing the current and previous reporting periods, evaluating and commenting on the submittals, archiving such comments, and filing the documentation submittals into an appropriate library/database after the review process is complete.

The manual handling of the activities of retrieving, organizing and filing represents a substantial labor intensive cost which is a time consuming task and increases when a contract is divided into multiple delivery orders, with each order requiring several documentation submittals from the contractor for example, in biweekly reporting periods. It is desired that an information management system be provided that analyzes the

information, past and present, supplied by the contractor so as to effectively evaluate and track the contract as it is being performed.

SUMMARY OF THE INVENTION

It is further desired that the necessary analysis for contract performance be accomplished automatically by an information system so as to eliminate the time and effort normally expended to perform manual bookkeeping and filing tasks.

Still further it is desired that the information system be provided so as to decrease the response time needed to track, monitor and provide feedback to the contractor so as to ultimately benefit the government because the review process is reduced and the time spent on tedious bookkeeping tasks may be devoted to more beneficial and rewarding endeavors.

The present invention provides a user with interactive processing that automatically and more efficiently, relative to prior art systems, handles the transactions for tracking contracts. The information system comprises a computer having data storage means, an interrogator for accessing the stored data, and an organizer for collating previous and recently submitted contract information so that the cognizant and updated data are transformed to a result by which the contract may be

automatically tracked and adherence to the contract requirements may be efficiently enforced.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete understanding of the invention and many of the intended advantages thereof will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in conjunction with the accompanied drawings, wherein corresponding reference characters indicate corresponding elements throughout and wherein:

FIG. 1 is a block diagram of the information system of the present invention; and

FIG. 2 illustrates a flow chart of the overall operation of the information system of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the drawing, there is shown in FIG. 1 an information system 10 that is particularly suited for tracking and evaluating the execution of government contracts. The information system 10 may be practiced in a computer system such as a personal computer. The information system 10 is responsive to application programs which may be stored on a readable substrate having a computer program saved thereon and when loaded and executed by the computer, the computer becomes a primary

apparatus for the practice of the present invention. The computer program code of the present invention may be stored on a storage medium, loaded into and/or executed by the computer or transmitted over some transmission medium such as over electrical wires or cables, through fiber optics, or via electromagnetic radiation. The information system 10 comprises processing elements having reference numbers which are given on Table 1.

TABLE 1

Reference Number	Processing Element
12	DOCUMENT STORAGE FILE
14	INTERROGATOR
16	ORGANIZER
18	DOCUMENT REVIEW FILE
20	DOCUMENT DATABASE

As discussed previously, the contract being handled by the information system 10 of the present invention requires the contractor to periodically submit documentation for tracking, evaluation and review by government personnel thereof. The submittal of such information is shown in FIG. 1 as being generally identified by reference number 24. The Contractor Officer Representative (COR) also supplies inputs to the information system 10 generally indicated by reference number 26. The submittal thereof may be done via electronic transmission or manually, with both methods of contractor submittal 24 being

indicated by signal path 28 that is directed into document storage file 12.

Document storage file 12 receives and stores current information submitted by contractors and represented by data and having identifying headers associated with government contracts of interest. Both the previous and recent submittals by the contractors have identifying headers. When the contractor submits the information it resides in the document storage file 12 until the process of the present invention is initiated, in a manner as to be more fully described hereinafter with reference to FIG.2. Such document storage capabilities are well known in the art and are provided by commercially available database programs.

The reading and retrieving of the information in the document storage file 12 is controlled by an interrogator 14 by way of signal paths 30 and 32, respectively. As indicated by bi-directional signal path 34, the interrogator 14 also retrieves and stores files in the document database 20, which contains all previous contractor submittals. Selection of specific contractor submittals stored in the document database 20 is controlled by the COR as will be described more fully hereinafter. After its operative interactions, interrogator 14 passes control to an organizer 16 by way of signal path 36.

The organizer 16 collates current and previous contractor information and stores this information in the document review file 18 by way of signal path 38. The document review file 18 is also responsive to commands given to the computer by the COR control 26, by way of signal path 40.

The document review file 18 routes, by the way of signal path 42, information to the document database 20 which updates its files in response to the received information. Additionally, the document review file 18 routes requests for specific contractor submittals from COR control 26 to interrogator 14 by way of signal path 44.

The overall operation of the information system 10 may be described with reference to FIG. 2 that illustrates a flow diagram 46 comprised of program segments given in Table 2.

TABLE 2

Reference Number	Processing Element
48	SUBMITTAL OF RECENT INFORMATION
50	STORE
52	INITIATE
54	SEARCH AND RETRIEVE PREVIOUS INFORMATION
56	COLLATING AND SORTING RECENT AND PREVIOUS INFORMATION
58	OPEN TO VIEW CONTENTS
60	APPEND TO DATABASE
62	ADD NEW CATEGORY
64	SUBMIT COMMENTS
66	SELECT SUBMITTALS
68	PERFORM ANALYSIS
70	DISPLAY ANALYSIS RESULTS

In overall operation, the information system 10 accesses the document database 20 for the previously stored data having identification headers representative of the previous information related to the government contract. This previous information is analyzed by the overall program 46 and compared to the recent information that is submitted into system 10 utilizing program segment 48 of FIG. 2. Upon such submittal, program segment 48 passes control to program segment 50 by way of signal path 72.

Program segment 50 stores the recently received information into the document storage file 12 where it resides. Program segment 50 then transfers control to program segment 52 by way of signal path 74.

Program segment 52 responds to an appropriate program segment 58-70, given to the computer by the user of the information management system 10 (the COR control 26 of FIG. 1) so as to initiate the appropriate instructions such as the reading of the recently submitted information of program segment 48. The reading uses identifying header information to gather contract number, delivery order number, contract data requirements listings (CDRL) number, codes to identify other submittals and all other recently submitted information stored in the document storage file 12. Upon completion of its assigned tasks, the program segment 52 passes control to program segment 54 by way of signal path 76.

Program segment 54 searches and retrieves the appropriate recent and previous information submitted by the contractor that is made available in document storage file 12 and document database 20, respectively, and passes control to program segment 56 by way of signal path 78.

Program segment 56 correlates and sorts the recent and previous information submitted by contractors for various analysis purposes. For example, for each delivery order, the status report, financial summary, and a certificate of performance submitted for the recent period is matched, in a manner known in the art, to corresponding documents previously submitted by contractors. The availability of the recent and previous information may also be analyzed for different purposes, such as those given in program segments 58-70 (all known in the art) to which program segment 56 selectively passes control by way of signal path 80 by the entry by the user of the information system 10 of appropriate commands.

Program segment 58, upon the input of the appropriate command by the user of the information system 10, causes the opening of the data storage file 12 so as to review its contents. The contents may be viewed on a visual display in a manner known in the art.

Program segment 60, upon the input of the appropriate command from the user of the information system 10, causes the appending of new data to the document database 20.

Program segment 62, upon the input of an appropriate command from the user of the information system 10, causes the adding of a new category to the document database 20. This new category may be necessitated by the contents of the recently submitted information from the contractor.

Program segment 64, upon the input of an appropriate command from the user to the information system 10, causes the submitting of comments and notes made by the government representative to the information supplied to the informational system contained in program segment 48.

Program segment 66 enables the COR 26 or user to select specific previous contractor submittals for comparison and analysis. Program segments 68 and 70 enable the COR 26 to perform analysis and view analysis results, such that data trends can be observed.

Program segments 58-70 each passes control back to program segment 52 by way of signal path 82 and program segment 52 initiates the appropriate instruction set corresponding to the program segments from which control was received.

The information system 10 performs housekeeping functions which preferably include replacing the previously submitted

contractor's information with the recently submitted contractor's information so as to have an updated reference to compare against the next submitted contractor's information. Updating or deleting previous information may also be performed. If desired, the information system 10 may return all of the contractor's information or only access and use selected information of the contractor, depending on the program segment 58-70 selected by the user.

It should now be appreciated that the practice of the present invention provides for an information system, and a method of operation thereof, having all the necessary processing elements so as to provide a real world solution to handling the information of complex business transactions, such as those required to be analyzed and understood to effectively control tracking, evaluating and analyzing government contracts.

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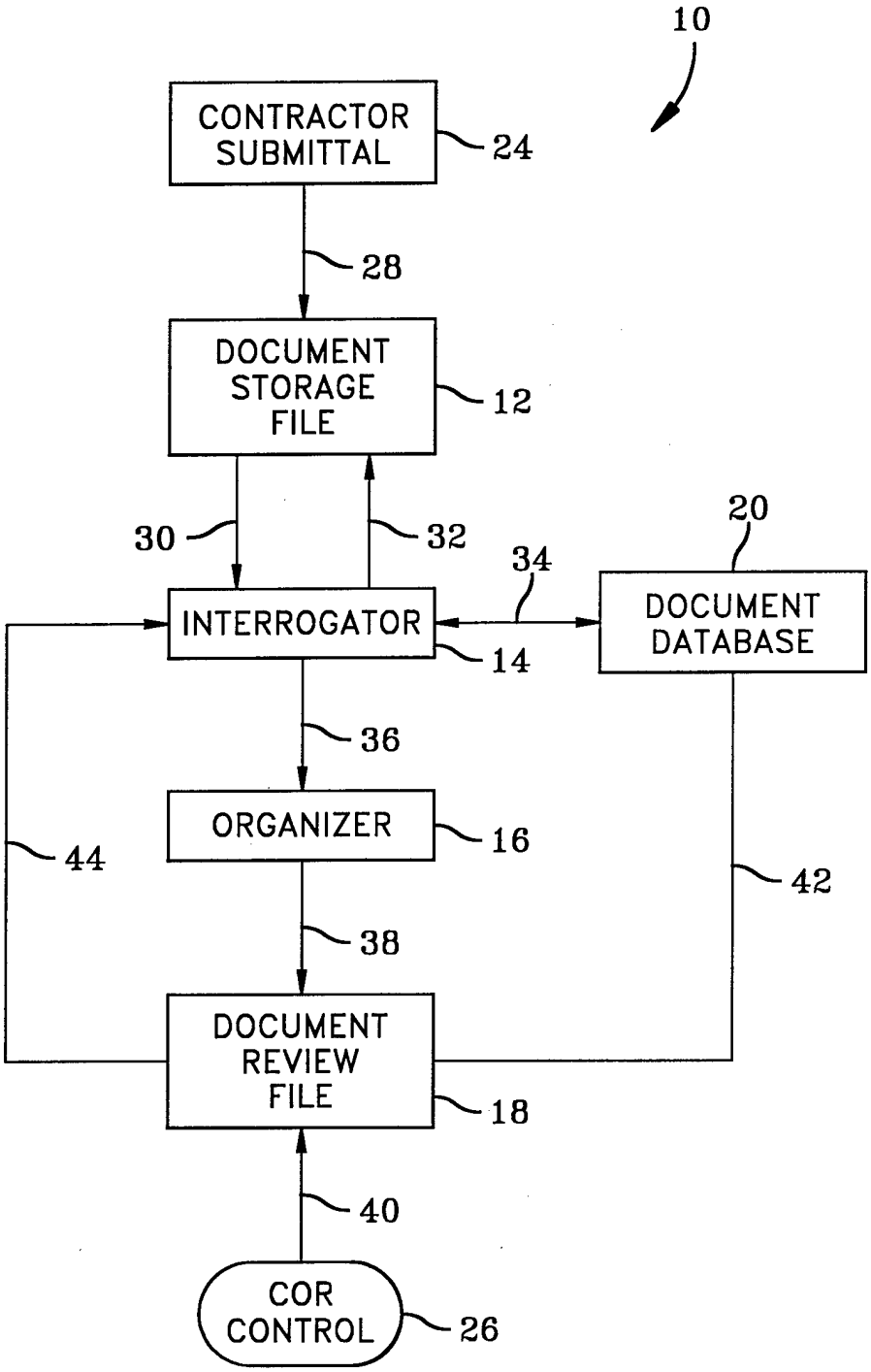
AN INFORMATION SYSTEM FOR HANDLING CONTRACT DOCUMENTATION

ABSTRACT OF THE DISCLOSURE

An information system is disclosed that is particularly suited for handling the data associated with the tracking and evaluation of contract performance. The information system comprises a computer having data storage means, an interrogator for accessing the stored data and an organizer for collating previous and recently submitted contract information so that the cognizant and updated data is transformed to a result by which the contract may be automatically tracked and adherence to the contract requirements may be efficiently enforced.


10
CONTRACTOR SUBMITTAL
24
28
DOCUMENT STORAGE FILE
12
30
32
20
34
INTERROGATOR
14
DOCUMENT DATABASE
36
ORGANIZER
16
44
42
38
DOCUMENT REVIEW FILE
18
40
COR CONTROL
26

FIG–1

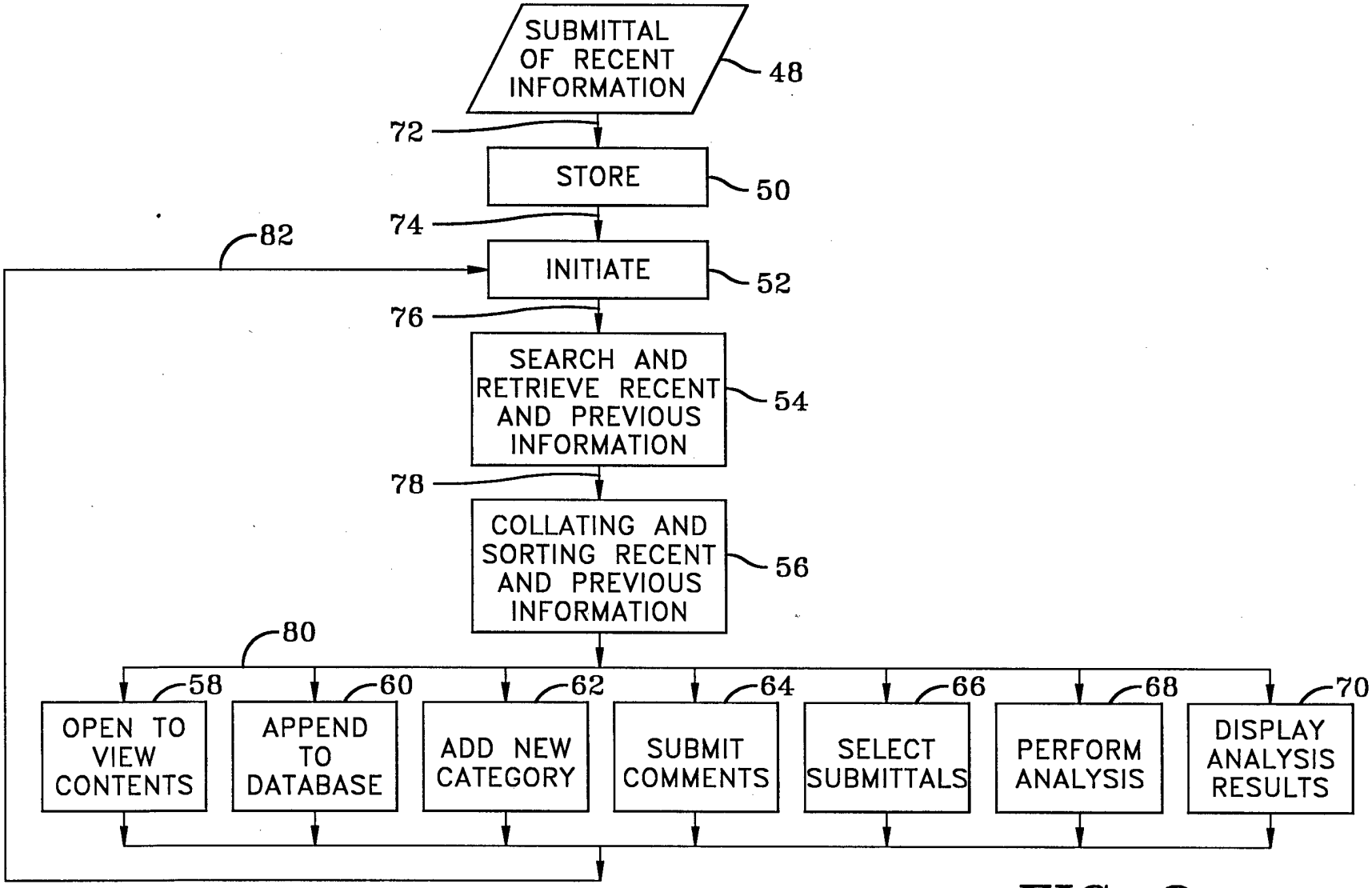

SUBMITTAL OF RECENT INFORMATION
48
72
STORE
50
74
82
INITIATE
52
76
SEARCH AND RETRIEVE RECENT AND PREVIOUS INFORMATION
54
78
COLLATING AND SORTING RECENT AND PREVIOUS INFORMATION
56
80
58
60
62
64
66
68
70
OPEN TO VIEW CONTENTS
APPEND TO DATABASE
ADD NEW CATEGORY
SUBMIT COMMENTS
SELECT SUBMITTALS
PERFORM ANALYSIS
DISPLAY ANALYSIS RESULTS

FIG-2