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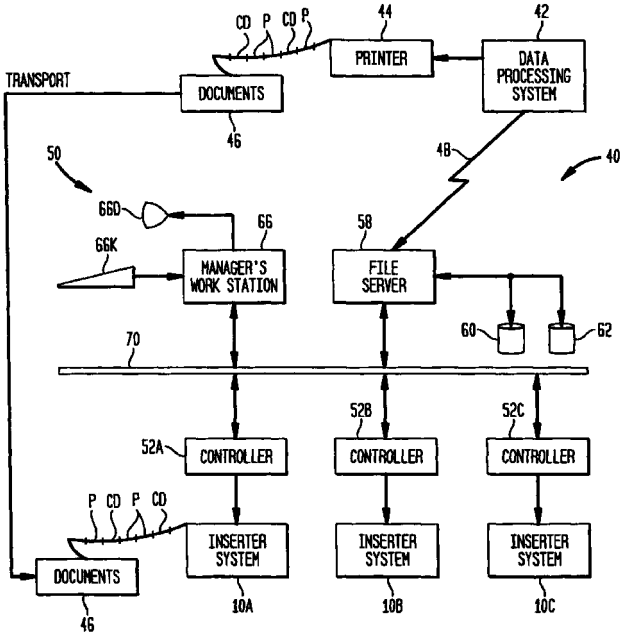
(54) System, method and apparatus for preparation of mailpieces

(57) A system, method and apparatus for preparing mailpieces. A inserter system (10) for assembling mailpieces (46) is controlled in accordance with mailpiece records (84) in a mailing control file (80). The inserter system scans control documents (CD) included in the mailpieces to identify corresponding mailpiece records. At least some of the mailpieces share common component data, such as bitmaps for logos to be printed on the mailpieces. Initially the inserter system accesses the mailing control file to identify current component data and updates component data to be used for a mailing as necessary.

FIG. 2



EP 0 977 136 A2

Description

[0001] This invention relates to the preparation of large mailings and the like. More particularly it relates to systems and apparatus for the preparation of documents and the assembly of multiple mailpieces including such documents.

[0002] The term "mailpieces" as used herein means items intended to be delivered by a postal service or private courier service. Typically preparation of mailpieces includes, but is not limited to, printing or otherwise providing documents including variable information pertaining to addressees of the mailpieces and the assembly of such documents with other elements of the mailpiece. The term "assembly" as used herein means the execution of actions to incorporate the documents into mailpieces. Typically, such actions can include: accumulating documents with other materials such as preprinted inserts, folding and inserting the resulting accumulations into envelopes, printing addresses and other information on the outside of the envelopes, and franking the mailpiece with an appropriate postage amount.

[0003] Inserter systems for the assembly of mailpieces are well known. A typical inserter system is shown in Figure 1. Inserter system 10 includes burster/feeder 12 which inputs preprinted documents in fanfold form, separates the documents and removes and discards sprocket feed strips FS from the edges of the document. Each group of documents for a particular mailpiece includes at least control document CD. On control documents CD strips FS are marked with code BC which is read by scanner 14 before strips FS are removed. In simpler systems code BC can be a "dash code" of the type crown for use in directly controlling inserter systems. In newer, more complex systems code BC can be a conventional bar code which serves as a pointer to a mailpiece record which record contains information for controlling the inserter; as will be more fully described below. In other known inserter systems, the documents can be in cut sheet form and a cut sheet feeder can be used in place of burster/feeder 12.

[0004] Control document CD, and any additional associated pages are fed from burster feeder 12 to accumulator 16 where documents for each mailpiece are formed into separate accumulations A and folded.

[0005] Accumulation A is then fed to insert stations 20A and 20B where preprinted inserts I are added to form accumulations A1 and A2. Those skilled in the art will of course recognize that the number of such insert stations used will vary from application to application.

[0006] Accumulation A2 is then fed to insert station 22 where it is inserted into an envelope and sealed to form mailpiece MP.

[0007] Mailpiece MP is then fed to address printer 24 which prints address AD on the outside of the envelope. Depending on the size of the print field of printer 24, printer 24 also can be used to print other information such as a variable return address (or other text message) RA, logo L, and postal barcode PBC on the envelope. (Those skilled in the art will recognize that dash codes as described above typically cannot include sufficient information to define even address AD so that systems incorporating dash codes typically use window envelopes to provide addressing information.)

[0008] System 10 also includes out stacker 30 for diverting mailpieces when an error is detected.

[0009] As noted above inserter systems wherein said code BC is a barcode which is used as a pointer to a mailpiece record (i.e. an electronic record associated with a mailpiece to be assembled) are known. By incorporating data for controlling assembly of mailpieces in mailpiece records an essentially unlimited amount of data can be associated with each mailpiece. Thus addresses, return addresses, logos, and postal bar codes can all readily be specified in addition to specification of the number of inserts to be added at each insert feeder, postage amounts, etc. Systems incorporating such mailpiece records are described in commonly assigned U.S. patent no. 4,800,505; to: Axelrod et al.; for: Mail Preparation System; issued Jan. 24, 1989, which is hereby incorporated by reference. Embodiments of the system of patent no. 4,800,505 are marketed by the assignee of the present application under the name "Direct Connection", described in *The Direct Connection*, version 1.30.

[0010] While systems such as those described above have proven highly successful certain disadvantages remain. In particular certain data used to control the assembly of mailpieces will be common to all, or a substantial portion of, the mailpieces in a mailing. (Hereinafter such data will be referred to as "component data".) For example, in applications where printer 24 is used to print a logo or other graphic a bit map of the graphic must be provided to printer 24. To avoid the need to store such a bit map in each mailpiece record each mailpiece record will include a field which specifies whether or not to print a logo on the associated mailpiece and will reference a bit map for the logo in the component data. Similarly, variable return addresses or text messages, and font and format information may be referenced by other fields in the mailpiece record. Other component data can include the weight of inserts and other elements of the mailpiece, and postal rate classes; used to compute postage amounts for mailpieces. Previously, component data such as bit maps and variable fonts were either unavailable or , at best, were "hardcoded" for specific applications or systems (i.e. the necessary code was incorporated directly into the specific application or system).

[0011] A disadvantage of prior art systems arises in the handling of component since the organization responsible for the generation of documents(typically an MIS Department) may not have the information or ability to assure that current component data is used. For example, an MIS Department may not be aware of a

marketing decision to change the font used on envelopes, or may not have the capability to update bit maps to reflect changes in a logo.

[0012] Also, it is likely that in a mailing operation having more than one inserter system, the organization which generates the documents will not have any control over which inserter system or systems are used to assemble mailpieces in a mailing, and thus no way to assure that the proper current component data is referenced by mailpiece records for that mailing.

[0013] Thus it is an object of the subject invention to provide a system, apparatus and method for the preparation and assembly of mailpieces with an improved capability for handling of component data.

[0014] The above object is achieved and the disadvantages of the prior art are overcome in accordance with the subject invention as defined by the claims by means of a system, apparatus and method for preparing mailpieces and the like. According to one aspect of the invention, there is provided an apparatus for assembling mailpieces, the mailpieces each including a control document, the control documents each including data for determining a unique identification code, the apparatus including: a first data store for storing a mailing control file, said mailing control file having a plurality of mailpiece records, each of the records including a plurality of fields, the fields containing data for controlling assembly of a mailpiece, and at least one of the records referencing component data common to a plurality of the records in the mailing control file, and each of the records including one of the unique identification codes, whereby each of the records defines preparation of at least one corresponding mailpiece, the file also including data for accessing current values of the component data. The apparatus further includes a mechanism for assembling the mailpieces, the assembling mechanism including a scanner or detector for detecting and outputting the determining data from the control documents, a second data store for storing the current values of the component data, and a programmable controller which: stores component data to be referenced by the at least one of the records, accesses the first data store to retrieve the mailing control file, accesses the second data store in accordance with the access data from the mailing control file to retrieve the current values of the component data, updates the component data to be referenced with the current values, accesses the records in accordance with the determining data from the control documents, and controls the assembling mechanism to prepare the corresponding mailpieces in accordance with the records and the updated component data to be referenced.

[0015] In accordance with another aspect of the subject invention the assembling mechanism includes an inserter system and the mailpiece records include insert control fields defining inserts to be assembled with the mailpiece.

[0016] In accordance with another aspect of the subject invention the assembling means includes printing means for printing on an exterior surface of the mailpiece, and the mailpiece records include print control fields for controlling the printing means. In accordance with another aspect of the subject invention the component data comprises a bit map representative of a graphic to be printed on at least some of the mailpieces. In accordance with another aspect of the subject invention the component data comprises a text message to be printed on at least some of the mailpieces.

[0017] In the system of the subject invention control documents for the mailpieces to be assembled by the above described apparatus are generated by a data processing system which outputs a mailing control file, the mailing control file including a plurality of mailpiece records, each of the records including a plurality of fields, the fields containing data for controlling assembly of a mailpiece, at least one of the records referencing component data common to a plurality of the records in the mailing control file, and each of the records including a unique identification code, whereby each of the records defines preparation of at least one corresponding mailpiece, the file also comprising data for accessing current values of the component data; and produces at least a control document for each of the mailpieces, each of the control documents including data for determining a corresponding one of the identification codes.

[0018] The method of the subject invention includes the steps of: storing a mailing control file, the mailing control file comprising a plurality of mailpiece records, each of the records including a plurality of fields, the fields containing data for controlling assembly of a mailpiece, at least one of the records referencing component data common to a plurality of the records in the mailing control file, and each of the records including one of the unique identification codes, whereby each of the records defines preparation of at least one corresponding mailpiece, the file also comprising data for accessing current values of the component data, storing the current values of the component data, and controlling the mechanism for assembling the mailpieces to: store component data to be referenced by at least one of the records, access the mailing control file, access the current values of the component data in accordance with the access data from the mailing control file, update the component data to be referenced with the current values, access the records in accordance with the determining data from the control documents; and control the assembling apparatus to assemble the corresponding mailpieces in accordance with the records and the updated component data to be referenced.

[0019] For a better understanding of the invention, and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawings:

FIG. 1 shows a schematic block diagram of a prior art inserter system.

FIG. 2 shows a schematic block diagram of a system for preparing mailpieces.

FIGS. 3A and 3B show a mailing control file and a typical mailpiece record.

FIGS. 4A-4C show a flow diagram of the operation of the system of FIG. 2.

[0020] Figure 2 shows mail preparation system 40 which includes data processing system 42 and mailpiece assembly system 50.

[0021] Data processing system 42 is programmed in a conventional manner to generate documents 46, which include control documents CD and associated documents P; with one control document CD and its associated documents P being associated with each mailpiece, wherein control documents CD are marked with barcode pointers to mailpiece records in the manner described above. In the embodiment shown, system 42 controls printer 44 to print documents 46 directly and documents 46 are transported physically for assembly; however, any convenient method of output ant transport, such as electronic output and transmission for remote printing, can be used and is within the contemplation of the subject invention.

[0022] Data processing system 42 also generates and outputs mailing control file 80 , shown in Figure 3A, which includes header 82 and a plurality of mailpiece records 84-1 through 84-N, in a conventional manner. Mailpiece records 84-1 through 84-N each include a plurality of fields 86A - 86F containing data for controlling assembly of the mailpiece. At least some of the fields reference component data to control mailpiece assembly, as will be further described below.

[0023] The mailing control file also includes data in header 82 for accessing current values of component data to be used in assembling mailpieces associated with the mailing control file. In other embodiments of the subject invention header 82 can contain additional information relating to the mailing as a whole, such as a mailing job ID or an account number to be charged mailing costs.

[0024] Figure 3B shows typical mailing record 84-M. (In general, the content and format of mailpiece records can be freely specified by system users. However, the record must include an index, or identification code, which establishes correspondence between the record and a corresponding mailpiece; and, in accordance with the subject invention, include at least one field which references an element of component data.) In record 84-M field 86A contains an index, or identification code; field 86B specifies the number of pages in the mailpiece; fields 86C and D specify whether or not corresponding insert stations will add inserts to the mailpiece; field 86E is a printer control field which specifies an address for the corresponding mailpiece; and field 86F is a printer control field which contains a pointer to a bitmap in the component data. In other embodiments records can include pointers to other or additional elements of component data such as text messages, as described above.

[0025] The mailing control file is communicated to mailpiece assembly system 50 through communications link 48, which can utilize any convenient form of communication, such as electronic data communication or the physical transfer of media without departing from the scope the subject invention.

[0026] In the embodiment shown in Figure 2, mailpiece assembly system 50 includes inserter systems 10A, 10B, and 10C, which are substantially similar to conventional inserter system 10 described above with reference to Figure 1, but necessarily must be of the type wherein control documents CD include a barcode pointer to a mailpiece record, to carryout the functions of mailpiece assembly. In other embodiments different types of inserter systems having expanded (e.g. more insert modules) or different functions (e.g. matched mail generation or address verification), but still including barcode pointers, can be used without departing from the scope of the subject invention.

[0027] It will also be apparent to those skilled in the art that, while the subject invention is preferably intended for use in the preparation of large mailings, in other embodiments the subject invention can be used for other applications. For example, in another embodiment the control document can be a freight bill and the elements assembled to form a package for delivery can be small items or packages.

[0028] Mailpiece assembly system 50 also includes controllers 52A, 52B, and 52C for controlling operation of inserter systems 10A, 10B, and 10C in a manner which will be described more fully below. Controllers 52A, B, and C also store values of the component data to be referenced by the mailpiece records as the mailing is processed. In other embodiments of the subject invention, portions of the component data can be stored by controllers 52A, B and C in various local memories of the inserter systems. For example, fonts or bitmaps can be stored in memory of address printer 24 (shown in Fig. 1). If bitmaps or fonts are stored in printer memory a mechanism to reload the data after power failure, etc. and to propagate updates to all printers used for the mailing must be provided.

[0029] Such mechanisms are well within the ability of those skilled in the art, and need not be discussed further here for an understanding of the subject invention.

[0030] Mailpiece assembly system also includes file server 58 which manages mailing control file database 60 which stores mailing control files downloaded from data processing system 42, and which also communicate appropriate mailing control files to controllers 52A, B or C as mailings are assigned to inserter systems, as will be more fully described below. Server 58 also controls component data database 62 which stores various sets of current component data values for use with various mailings. For example, a production mail job shop which prepares mailings for various clients might store

different sets of current values of component data for each client. Server 58 also communicates appropriate current values of component data to controllers 52A, B or C as mailings are assigned to inserter systems, as will be more fully described below. (Databases 60 and 62 are preferably stored on a common storage device but are shown separately for ease of illustration.)

[0031] Mailpiece assembly system also includes manager's workstation 66, which includes display 66D and keyboard 66K through which a site manager can provide operational management input such as accessing and editing databases 60 and 62 or assigning mailings to various inserter systems. Current values of component data also can be updated through workstation 66 or in any other convenient manner.

[0032] Communications among workstation 66, file server 58 and controllers 52A, B and C is preferably carried out over a conventional local area network in a manner well understood by those skilled in the art and which need not be discussed further for an understanding of the subject invention.

[0033] Turning to Figures 4A, B, and C, a high level flow diagram of the operation of mailpiece assembly system 50 in accordance with the method of the subject invention is shown.

[0034] At 100 a selected controller, hereinafter assumed for purposes of explanation to be controller 52A, inputs an ID for a mailing job assigned through manager's workstation 66. In other embodiments the mailing job ID can be read from the first mailpiece, or input in any convenient manner. At 102 controller 52A accesses the corresponding mailing control file in database 60 through file server 58. (In other equivalent embodiments workstation 66 directs server 58 to download the selected mailing control file to controller 52A.) Then at 104 controller 52A tests to determine if an appropriate matching control file has been found, and if not at 106 exits to error routine 110. If the appropriate mailing control file is found controller 52A continues toto 112 to input the appropriate mailing control file.

[0035] Then at 114 controller 52A tests the data for accessing the current values of component data to identify the current values associated with the mailing control file, i.e. with the assigned mailing job. Then at 118 controller 52A tests to determine if these current values are stored in controller 52A, or local memory of inserter system 10A, and, if they are at 120 goes to 124. Otherwise, at 122 controller 52A updates the stored component data which will be referenced by the mailpiece records and then continues to 124.

[0036] At 124 controller 52A tests to determine if inserter system 10A is ready; that is documents, inserts, envelopes, etc. have been loaded, needed stations of inserter system 10A have been activated and all necessary preparatory actions have been taken, as will be well understood by those skilled in the art. If system 10A is not ready then at 128 controller 52A loops back through 128 to wait for a ready condition. Otherwise at 130 controller 52A controls inserter system 10A to input the next control document CD, together with any additional associated pages, and at 132 reads the record number (i.e. identification code) which associates that control document CD and corresponding mailpiece with a mailpiece record. At 136 controller 52A controller 52A tests to determine if a record number has been successfully read, and, if not exits to error routine 138.

[0037] If a record number is successfully read, then at 140 controller 52A accesses database 60 through server 58 to read the corresponding record, and at 142 tests to determine if the appropriate mailpiece record has been found. If the record is not found at 146 controller 52A enters error routine 148.

[0038] In a preferred embodiment of the subject invention, sequential record numbers are incremented by in the mailing control file and mailpieces are processed in record number order, and error routines 138 and 148 can use this information to recover. In other embodiments mailpieces are processed randomly with respect to record numbers and the error routines require operator intervention.

[0039] If the mailpiece record is found then controller 52A goes from 146 to 150 and increments processing of each of the, possibly multiple, mailpieces which is in inserter system 10A. That is each mailpiece movers to the next assembly processing station for further assembly in accordance with the appropriate fields of the corresponding mailpiece records which have been input by controller 52A and the updated component information which is referenced by those fields.

[0040] Then at 154 controller 52A tests to determine if the last mailpiece record in the mailing control file has been input. If not controller 52A loops back through 130 to continue input of mailpiece records and assembly of mailpieces. If the last record has been input controller 52A continues from 156 to 160 to test to determine if the last mailpiece has been completely assembled, and if not, at 162 loops back through 150 to continue assembly of mailpieces in inserter system 10A. When the last mailpiece is done controller 52A exits at 162.

[0041] The embodiments described above and illustrated in the attached drawings have been given by way of example and illustration only. from the teaching of the present application those skilled in the art will readily recognize numerous other embodiments in accordance with the subject invention. Accordingly, limitations on the subject invention are to be found only in the claims set forth below.

Claims

1. Apparatus for assembling mailpieces, said mailpieces (46) each including a control document (CD), said control documents each including data for determining a unique identification code, said apparatus comprising:

a) first storing means(60) for storing a mailing control file (80), said mailing control file comprising a plurality of mailpiece records (84), each of said records including a plurality of fields (86), said fields containing data for controlling assembly of a mailpiece, at least one of said records referencing component data common to a plurality of said records in said mailing control file, and each of said records including one of said unique identification codes, whereby each of said records defines preparation of at least one corresponding mailpiece, said file also comprising data for accessing current values of said component data;

b) means for assembling said mailpieces, said assembling means (50) including means for detecting and outputting said determining data from said control documents;

c) second storing means (62) for storing said current values of said component data;

d) control means (52) for:

d1) storing component data to be referenced by said at least one of said records;

d2) accessing said first storing means to retrieve said mailing control file;

d3) accessing said second storing means in accordance with said access data from said mailing control file to retrieve said current values of said component data;

d4) updating said component data to be referenced with said current values;

d5) accessing said records in accordance with said determining data from said control documents;

d6) controlling said assembling means to prepare said corresponding mailpieces in accordance with said records and said updated component data to be referenced.

2. Apparatus as described in claim 1 wherein said assembling means comprises an inserter system (10) and said mailpiece records include insert control fields (86C, 86D) defining inserts to be assembled with said mailpiece.

3. Apparatus as described in claim 1 or 2 wherein said assembling means includes printing means (24) for printing on an exterior surface of said mailpiece, and said mailpiece records include print control fields (86E, 86F) for controlling said printing means.

4. Apparatus as described in claim 1, 2 or 3 wherein said component data comprises a bit map representative of a graphic to be printed on at least some of said mailpieces.

5. Apparatus as described in any one of claims 1 to 4 wherein said component data comprises a text message to be printed on at least some of said mailpieces.

6. A system for preparing mailpieces (46), said mailpieces each including a control document (CD), said system comprising:

a) a data processing system programmed to generate a mailing job comprising a plurality of mailpieces, by;

a1) outputting a mailing control file (80), said mailing control file comprising a plurality of mailpiece records (84), each of said records including a plurality of fields (86), said fields containing data for controlling assembly of a mailpiece, at least one of said records referencing component data common to a plurality of said records in said mailing control file, and each of said records including a unique identification code, whereby each of said records defines preparation of at least one corresponding mailpiece, said file also comprising data for accessing current values of said component data;

a2) producing at least a control document (CD) for each of said mailpieces, each of said control documents including data for determining a corresponding one of said identification codes;

b) first storing means (60) for receiving and storing said mailing control file,

c) means for assembling said mailpieces of said assembling means (50) including means for detecting and outputting said determining data from said control documents;

d) second storing means (62) for storing said current values of said component data; and

e) control means (52) for:

e1) storing component data to be referenced by said at least one of said records;

e2) accessing said first storing means to retrieve said mailing control file;

e3) accessing said second storing means in accordance with said access data from said mailing control file to retrieve said current values of said component data;

e4) updating said component data to be referenced with said current values;

e5) accessing said records in accordance with said determining data from said control documents;

e6) controlling said assembling means to prepare said corresponding mailpieces in

accordance with said records and said updated component data to be referenced.

7. A system as described in claim 6 wherein said assembling means (50) comprises an inserter system (10) and said mailpiece records (84) include insert control fields (86C, 86D) defining inserts to be assembled with said mailpiece.

8. A system as described in claim 6 or 7 wherein said assembling means (50) includes printing means (124) for printing on an exterior surface of said mailpiece, and said mailpiece records include print control fields for controlling said printing means.

9. A system as described in claim 6, 7 or 8 wherein said component data comprises a bit map representative of a graphic to be printed on at least some of said mailpieces.

10. A system as described in any one of claims 6 to 9 wherein said component data comprises a text message to be printed on at least some of said mailpieces.

11. A system as described in any one of claims 6 to 10, further comprising a manager's workstation (66) for providing operational management input.

12. A method for controlling assembly of mailpieces (46), said mailpieces each including a control document (CD), said control documents each including data for determining a unique identification code, at least some of said mailpieces being assembled in accordance with common component data, said method comprising the steps of:

a) storing a mailing control file (80), said mailing control file comprising a plurality of mailpiece records (84), each of said records including a plurality of fields (86), said fields containing data for controlling assembly of a mailpiece, at least one of said records referencing component data common to a plurality of said records in said mailing control file, and each of said records including one of said unique identification codes, whereby each of said records defines preparation of at least one corresponding mailpiece, said file also comprising data for accessing current values of said component data;
b) storing said current values of said component data;
c) controlling apparatus for assembling said mailpieces to:

c1) store component data to be referenced by said at least one of said records;
c2) access said mailing control file;
c3) access said current values of said component data in accordance with said access data from said mailing control file;
c4) update said component data to be referenced with said current values;
c5) access said records in accordance with said determining data from said control documents; and
c6) control said assembling apparatus to assemble said corresponding mailpieces in accordance with said records and said updated component data to be referenced.

13. A method as described in claim 12 wherein said component data comprises a bit map representative of a graphic to be printed on at least some of said mailpieces.

14. A method as described in claim 12 or 13 wherein said component data comprises a text message to be printed on at least some of said mailpieces.

15. Apparatus for assembling groups, said groups each including a control document, said control documents each including data for determining a unique identification code, said apparatus comprising:

a) first storing means for storing a control file, said control file comprising a plurality of group records, each of said records including a plurality of fields, said fields containing data for controlling assembly of a group, at least one of said records referencing component data common to a plurality of said records in said control file, and each of said records including one of said unique identification codes, whereby each of said records defines preparation of at least one corresponding group, said file also comprising data for accessing current values of said component data;
b) means for assembling said groups, said assembling means including means for detecting and outputting said determining data from said control documents;
c) second storing means for storing said current values of said component data;
d) control means for.

d1) storing component data to be referenced by said at least one of said records;
d2) accessing said first storing means to retrieve said control file;
d3) accessing said second storing means in accordance with said access data from said control file to retrieve said current values of said component data;
d4) updating said component data to be

referenced with said current values;

d5) accessing said records in accordance with said determining data from said control documents;

d6) controlling said assembling means to prepare said corresponding groups in accordance with said records and said updated component data to be referenced.

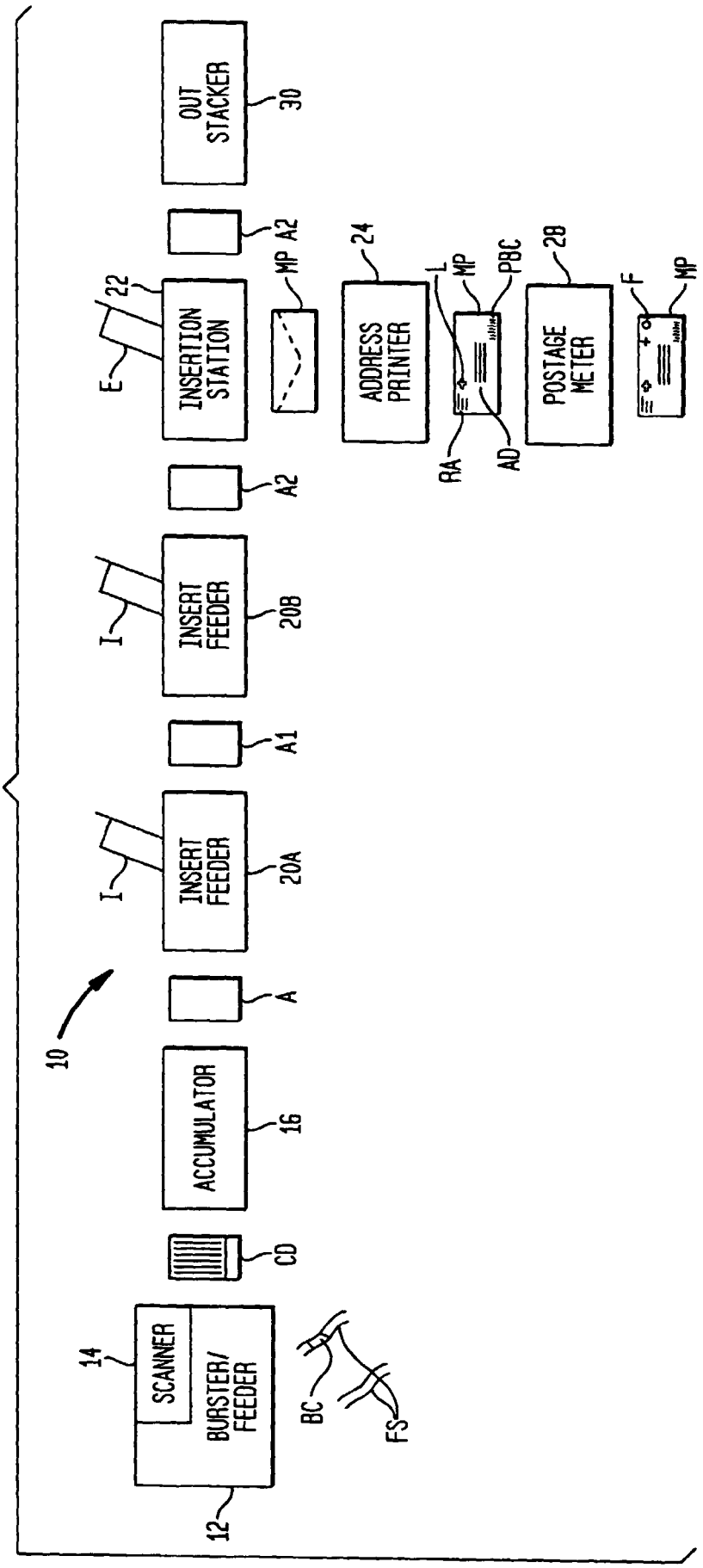
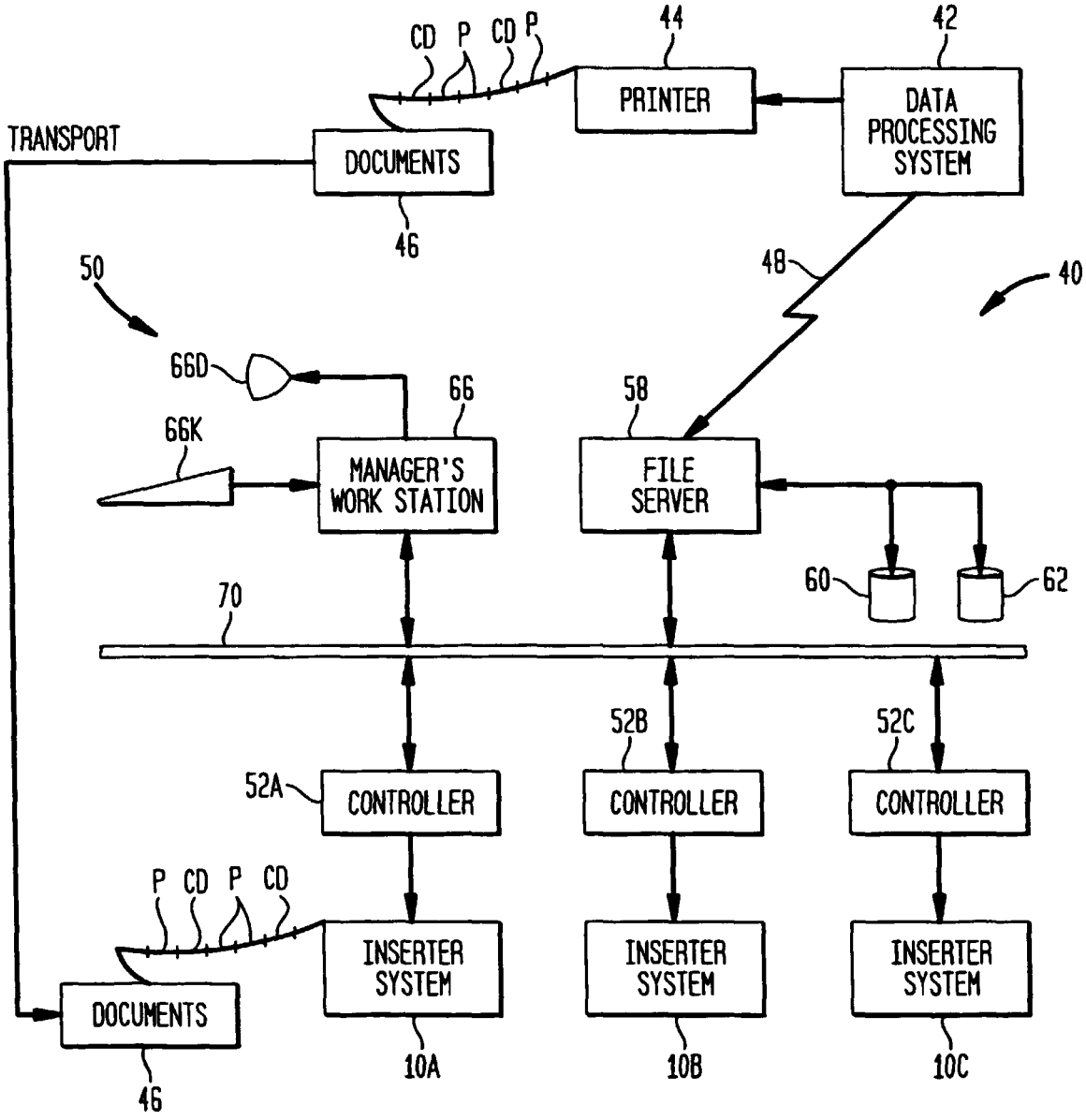


FIG. 1
(PRIOR ART)

FIG. 2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TRANSPORT
DOCUMENTS
46
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48
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66
58
66K
MANAGER'S WORK STATION
FILE SERVER
60
62
70
52B
52C
52A
CONTROLLER
CONTROLLER
CONTROLLER
P
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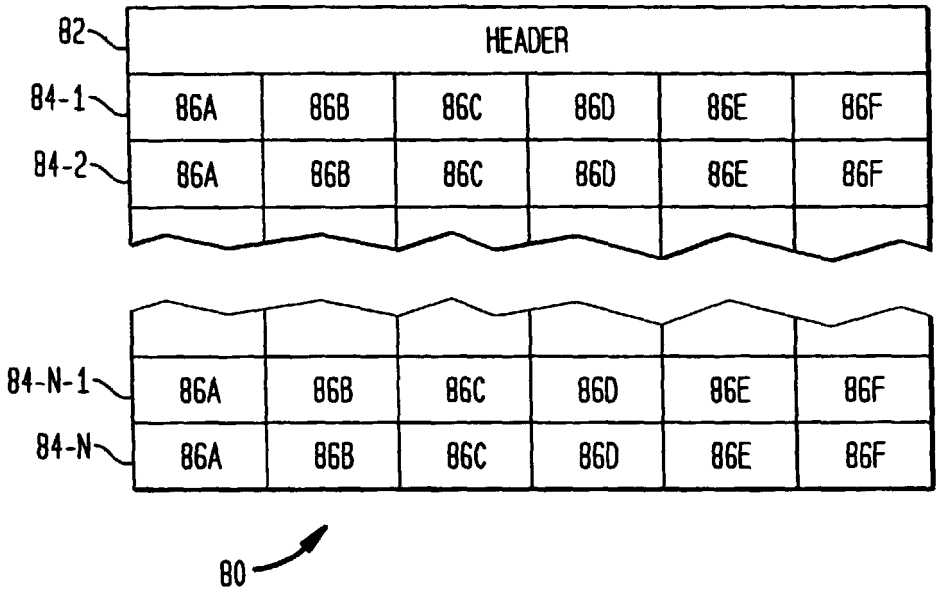
INSERTER SYSTEM
INSERTER SYSTEM
INSERTER SYSTEM
DOCUMENTS
46
10A
10B
10C

FIG. 3A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86A
86B
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86D
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86F
84-2
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86B
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84-N-1
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86B
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86E
86F
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FIG. 3B

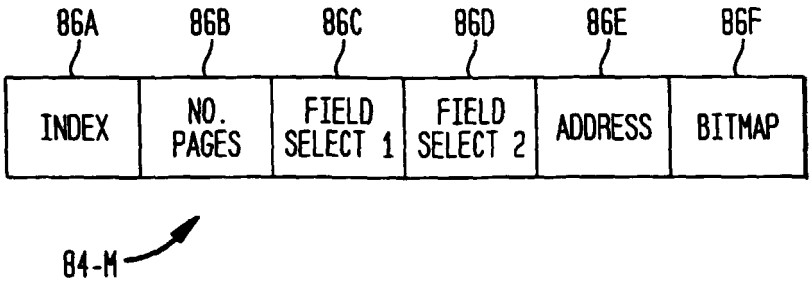
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FIG. 4A

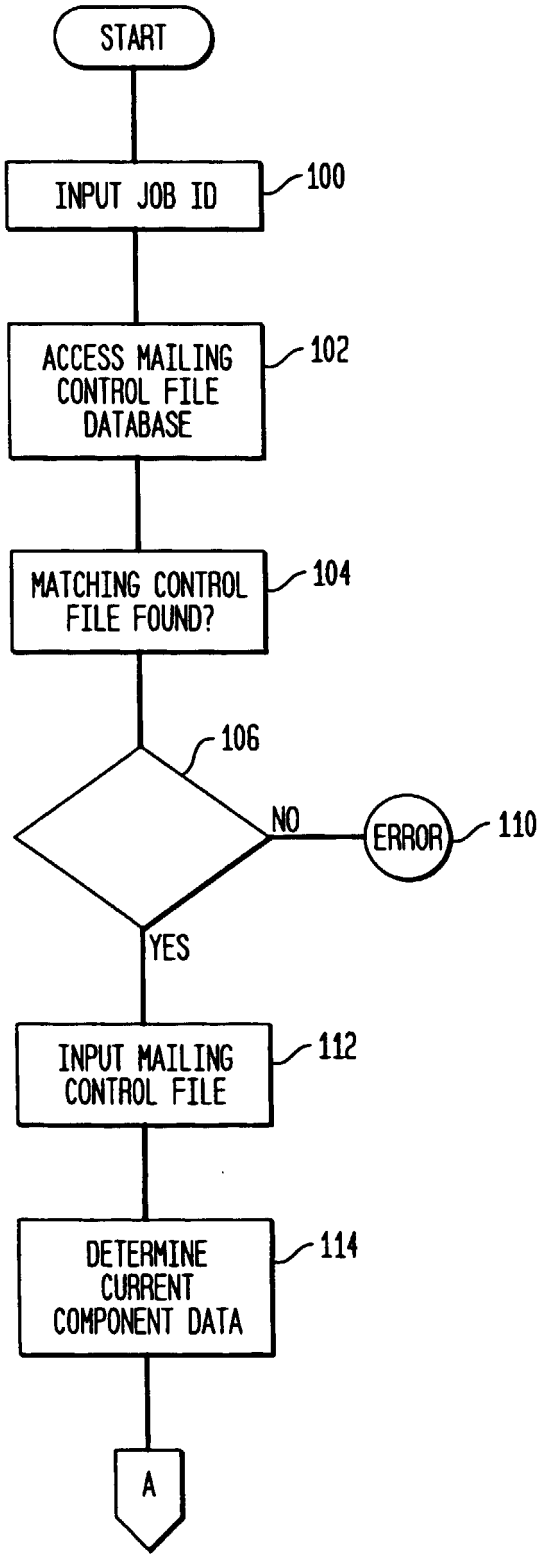

START
INPUT JOB ID
100
ACCESS MAILING CONTROL FILE DATABASE
102
MATCHING CONTROL FILE FOUND?
104
106
NO
ERROR
110
YES
INPUT MAILING CONTROL FILE
112
DETERMINE CURRENT COMPONENT DATA
114
A

FIG. 4B

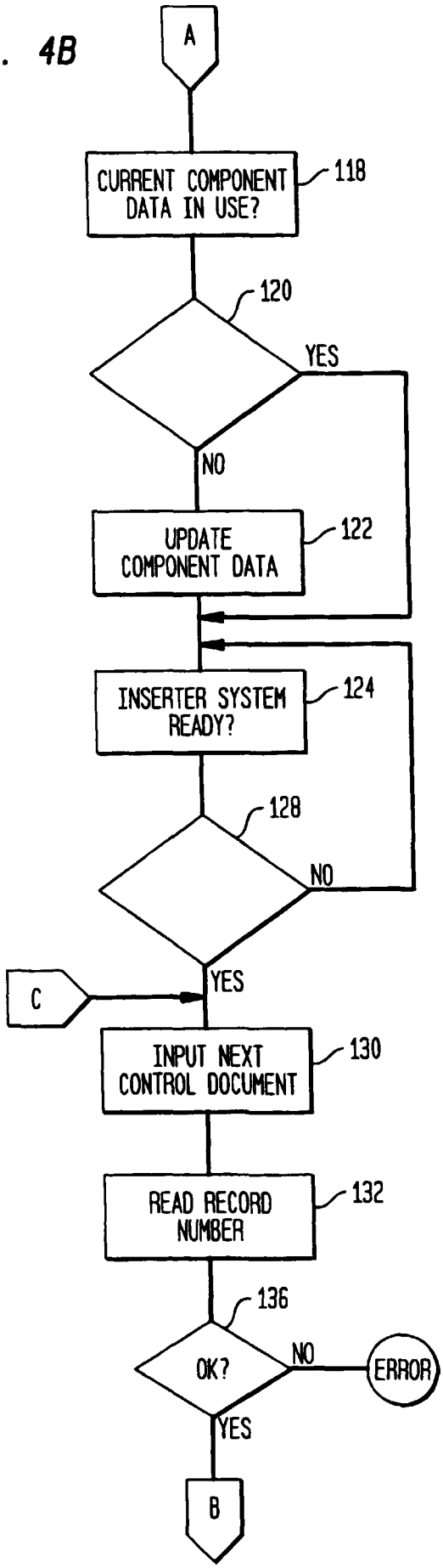
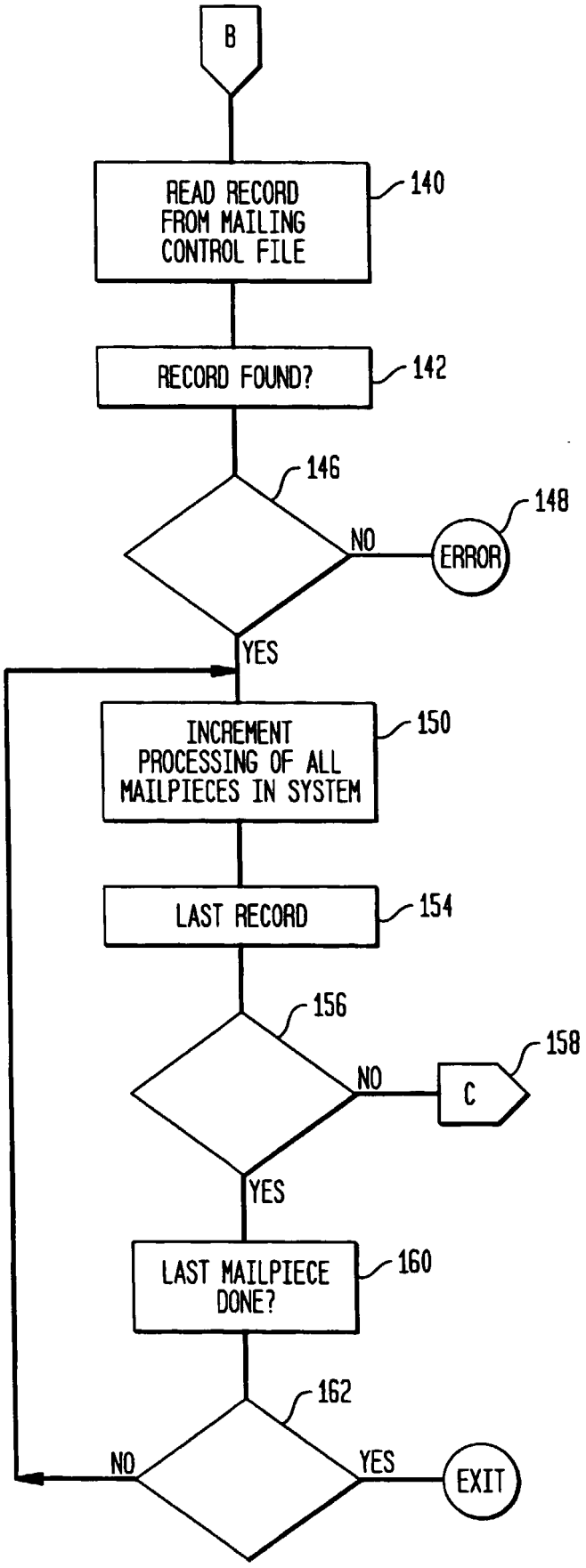

A
CURRENT COMPONENT DATA IN USE?
118
120
YES
NO
UPDATE COMPONENT DATA
122
INSERTER SYSTEM READY?
124
128
NO
C
YES
INPUT NEXT CONTROL DOCUMENT
130
READ RECORD NUMBER
132
136
OK?
NO
ERROR
YES
B

FIG. 4C


B
READ RECORD FROM MAILING CONTROL FILE
140
RECORD FOUND?
142
146
NO
148
ERROR
YES
INCREMENT PROCESSING OF ALL MAILPIECES IN SYSTEM
150
LAST RECORD
154
156
NO
158
C
YES
LAST MAILPIECE DONE?
160
162
NO
YES
EXIT