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(54) **Mail processing system incorporating selective message conversion.**

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(73) Proprietor: **Koninklijke PTT Nederland N.V.**
P.O. Box 95321
NL-2509 CH The Hague (NL)

(72) Inventor: **Spanjersberg, Arie Adriaan**
54 Park Sparrendaal
NL-3971 SM Driebergen (NL)

EP 0 467 438 B1

Description

A. BACKGROUND OF THE INVENTION

1. Field of the invention

The invention relates to a mail processing system for processing physical mail items, such as letters, forms and the like.

2. Prior art

Mail processing systems are generally known in which mail items are routed to the addressed recipient on the basis of markings, i.e. the name and the address of the addressee or a freepost number, provided by the sender on the mail item. Since very large numbers of mail items are involved in this process per day (more than 10 million items in the Netherlands), use is made of mechanical and electronic aids where possible. Thus, it is possible to have the addresses, in particular the post codes, read out (semi) automatically from most of the daily mail flow and to have it (largely) routed.

It is also generally known to read out the messages which are contained in the mail items after receipt at the recipients premises and to convert them at least partly into electronic information with the aid of electronic and mechanical equipment. That is in fact the case, inter alia, in processing payment instructions at banking institutions and order instructions at mail order companies. In this connection, use is usually made of forms preprinted by the institution concerned on which as much relevant data as possible are already provided, often in the form of OCR script, i.e. in a type of script which can be read both by humans and by machine. Said OCR script is machine-readable using comparatively simple and rapidly-operating read algorithms with the aid of which the characters are converted into (for example) binary character series, for example according to the known ASCII standard. Instead of OCR script, use can also be made of, for example, optical bar codes. The other written or typed data are read out by machine using relatively complex read algorithms which are comparatively computer-intensive. The result of this read-out operation is usually lower than that of the OCR script and therefore normally requires human intervention for some of the forms to be processed (the so-called "rejects").

B. SUMMARY OF THE INVENTION

The invention is based on the insight that it is possible and attractive not to first convey mail items of the type indicated above in their original physical form to an addressee who then converts said mail items, that is to say the relevant message content thereof, into electronically processable messages as dealt with above, but to convert said messages even at a previous stage which is as early as possible and then to transmit said messages, converted into electronic messages, by electronic means to the addressed recipient (or another recipient indicated by the latter). The advantage of this is that, since the transmission of electronic messages is appreciably faster than that of "written" messages such as mail items and also offers more possibilities (such as, for example, multiple transmission), the messages concerned can be received and processed by the recipient(s) within a minimum time. Furthermore, several recipients (users of the system, i.e. of the conversion facility) can make use of one and the same common conversion facility (instead of each making use of his own conversion facility), which common conversion facility can always be provided with the most modern, fastest and most reliable means and can moreover be centrally maintained since the costs thereof are carried by all said users and can therefore be shared among the total number of mail items to be converted ("economies of scale").

Of course, the mail flow comprises many mail items whose message does not have to be converted into electronic information. The invention therefore provides that, for example, at the point in the mail system where the said conversion takes place, the mail items are "examined" to see whether they are to be converted into electronic messages or not. The point in the mail system where mail items are examined for whether they have to be converted or not (detection point) may, moreover, even be situated upstream of the point where said conversion in fact takes place (conversion point).

Based on the above considerations, the present invention provides a mail processing system as specified in claim 1. In this process, the control word indicates that the mail item has to be converted into an electronic message which has to be transmitted further by electronic means. Moreover, it is also possible that the actual conversion does not take place in the same mail routing centre as that where the control word is detected; in other words, the detection point and the conversion point may be situated at different positions in the mail flow. The detection point and the conversion point may, of course, also be situated at different locations inside one and the same mail routing centre. This procedure can have the advantage that the mail items which have to be converted are separated from the "normal" mail flow in good time and transmitted to a special processing centre (inside or outside the same routing centre) equipped for

the conversion into electronic messages.

The control word may be a separate code specially intended to indicate that the mail item has to be converted, but the control word may also be part of the "normal" address of the addressee, for example partly formed by the postcode. Owing to the automatic reading-out of the control word, however, this will preferably have to be provided at a standardised position on the mail item. Use may also be made of a combination of a special code, for example to indicate that the message of said mail item has to be converted into an electronic message, and a part of the normal address which then serves to indicate to which recipient said electronic message has to be transmitted. The control word may also solely indicate that the message of the mail item has to be converted, while further information, such as the address to which the converted message has to be sent and any further parameters, is derived from the message on the mail item (for example, indicated by a special code in said message).

Elaborated further, the invention preferably provides that the control word detected in the mail routing centre is compared with one or more selection words, and in the event of agreement, the message or a part thereof is read out and converted into an electronic message, and also that the electronic message is transmitted to the recipient concerned via an electronic transmission medium. The users (recipients) who wish to make use of the conversion facility for the mail addressed to them indicate this by means of the said control word on the mail item. According to this preferred embodiment, said control word is therefore compared with a selection word and in the event of agreement, the message content of the mail item is converted. The address and other parameters can also be derived from said control word or from a part of the message content. In the first case, the control word can be compared for each mail item with several selection words which each relate, for example, to a particular addressee or addressee category or to, for example, a particular set of transmission parameters. The sorting of the mail items indicated here may take place under the control of a special control word provided for that purpose on the mail item, by means of the "normal" addressing provided on the mail item, or by a combination of those two. For that reason provision can be made that the control word and/or the address words (or rather, the single or the multiple control word) are compared with one or more selection words in order to achieve the desired sorting. Hereinafter it is assumed, for the sake of convenience, that use is made of a single control word which indicates that the message of the mail item has to be converted into an electronic message. Moreover, it is quite possible that the person concerned who is addressed as recipient of the mail item wishes to have the message transmitted not (only) to himself, but (in addition) to another recipient. This may, for example, be the case if the mail item is the order form of a mail order company whose delivery of the orders takes place at another address (for example, by another organisation). In this case, it is also possible that the mail item itself (the order form) is transmitted via the normal postal route to the mail order company after having been converted and transmitted by electronic means to the delivering address.

Preferably, provision is made that the said control word to be compared with the selection words is provided on the mail item in the form of a machine-readable code, for example an optical bar code. Apart from the control word, it is furthermore possible, according to the invention, that the message intended for the recipient is shown at least partly in machine-readable code script.

A preferred embodiment of the invention provides that the message or a part thereof is converted by conversion means into a corresponding electronic message by means of a conversion process, one or more conversion parameters of which are derived from a first parameter code. The conversion parameters control the conversion process. Thus, these parameters may indicate the way in which the message or various parts of the message have to be processed. A video picture (for example) is taken of the message, for example the said instruction form, the various relevant areas of said video picture - i.e. the video signals of said areas - having to be processed in a manner such that the desired binary signals result therefrom. The areas containing exclusively machine-readable characters can be converted into the desired binary signals with the aid of relatively simple (and fast) conversion algorithms. However, the areas which contain hand-written or typed script have to undergo an appreciably more complex signal processing. The said conversion parameters control this process. They may, for example, indicate which areas of the video picture taken have to be converted with the aid of which algorithms. Further, the conversion parameters can also preferably set process variables which relate to the conversion quality ("reject" threshold) and to the processing of not (well) converted or convertible messages ("rejects"). In this connection, mention may be made of the use of control parameters with the aid of which a check is made on whether the message has been correctly converted. One possibility is that if the message contains, for example, order numbers, the latter must satisfy a particular control condition (for example, the sum of the numbers must have a particular value). Said control condition can then be

set as a conversion parameter. Furthermore, what action has to take place if the control condition is not satisfied can also be set by means of the conversion parameters. One possibility is, if so, to transmit an error message along with the order number to be converted. Possibly, however, this may also precede [sic] by a reconversion cycle in which message parts (in this case order numbers) which do not satisfy the control condition are converted manually; if that manual intervention does not offer a remedy, the error message is still transmitted at the same time. The parameter code from which the conversion parameters are derived is preferably derived from the mail item to be converted, i.e. from the control word or from a part of the actual message. This makes it possible for different users of the system (in this case different mail order companies and the like) to be able to make use of different forms and also, furthermore, for the conversion process to be capable of being tailored to the different wishes and requirements (especially with respect to the control possibilities) of the different users; the system according to the invention is consequently very flexible and can provide a very large number of options, not only in relation to the conversion process but also in relation to the transmission of the converted message, which will be dealt with below.

After the conversion, the electronic message is transmitted to the original addressee or another recipient. Preferably, the invention makes provision in this connection that the converted electronic message is transmitted by means of a transmission device under the control of one or more transmission parameters which are derived from a second parameter code. The transmission parameters derived from the second parameter code may relate to the address to which the electronic message has to be transmitted, the settings to be used in the process, the transmission protocol to be used in the process, etc.

The parameter codes (first and second parameter code, respectively) relating to the conversion and/or transmission parameters may form part of the control word or of the message content of the mail item. In the first case, the parameters can be set as soon as the control word is read out, and in the second case they are set when the message content is read out. In the last case, the parameter codes preferably form part of the machine-readable part of the message and said part has a fixed position (for all users) on the form from which it is read out prior to reading out the rest of the message. Preferably, the invention provides in this connection that the various first and second parameter codes, respectively, are stored together with their associated conversion parameters and transmission parameters, respectively, in a memory device, and that said conversion and transmission parameters, respectively, are read out from said memory device on the basis of the respective first and second parameter code, respectively, derived from the control word and from the message of the mail item, respectively, and are used in the conversion and transmission, respectively. The parameters needed for conversion and transmission, respectively, are in this case therefore stored in a table in the memory device, which table has the various first and second parameter codes which may occur, as input, and the associated conversion and transmission parameters, respectively, as output. It is pointed out, moreover, that, if desired, the first and second parameter code may be combined to form one code, with the aid of which both the conversion parameters and the transmission parameters are set.

C. REFERENCES

None

D. EXEMPLARY EMBODIMENT

1. Description of figures

Figure 1 shows diagrammatically a mail item whose message content has to be converted into an electronic message.

Figure 2 shows diagrammatically an exemplary embodiment of the mail processing system according to the invention, indicating therein the route of a mail item whose message content is converted into an electronic message and the route of said electronic message, and moreover, the means needed for the conversion and transmission.

Figure 3 corresponds virtually entirely with Figure 2 and shows diagrammatically an exemplary embodiment of the mail processing system according to the invention for the conversion of the message content of mail items in envelopes.

2. Operation

Figure 1 shows the front and rear of a mail item 1 with an address area 2 (name, address, postcode and place of residence) and a sender area 3 (name, address, postcode and place of residence) on the front, and a message 4 in the form of an order list on the back. The mail item 1 is an order card in the form of a postcard and is not enclosed by an envelope. The advantage of this is that the order card does not have to be taken out of an envelope prior to the message conversion; a disadvantage is, however, that users of such a card describe the lack of an envelope as a lack of privacy. If an order form is in fact enclosed by an

envelope, this situation is also shown by Figure 1; the left-hand half of the figure then shows the address side of the envelope and the right-hand half of the figure shows the message side of the order form. The message 4 contains a code area 5, an article number area 6, a quantity area 7 and a sender area 8. The sender can place orders to, for example, a mail order company on the order card. For this purpose, the sender enters the article numbers of the articles he desires in the article number area 6, together with the quantities desired in this connection, which are entered in the quantity area 7. After that a description of the article can also be specified if desired. Provided on the front of the order card 1 (or on the envelope) in a code area 9 is a special code which indicates that the order card has to be converted into an electronic message.

Figure 2 shows an exemplary embodiment of the mail processing system according to the present invention. Said Figure 2 again shows the order card 1, which can be deposited in a mail receiving device 10, for example a post office or letter box. Said mail item 1 is conveyed in the known manner together with all the other mail items to a mail routing centre 11. In said mail routing centre 11, all the mail received is first sorted and postmarked (12), after which the mail items are transported to a selection device 13 where whether a mail item has to be converted into an electronic message or not is then detected. In this exemplary embodiment, this selection takes place on the basis of the code shown in Figure 1 in the code area 9. If said code is lacking or does not satisfy particular criteria, the mail item concerned is transmitted in the normal way and processed in the normal postal (routing) system, which will not be discussed further here. If, however, a mail item is provided with a code satisfying the criteria concerned in the code area 9, said code is read out by the selection device 13. Said code therefore forms the control word, on the basis of which the further processing of the mail item, in particular the conversion of the message thereof into an electronic message, takes place. The control word 9 is compared with a number of selection words s which are stored in a register in a memory device 14. Each of the selection words stored therein is assigned to a particular addressee (user), for example a mail order company, a bank or an institution of this type, which addressee has provided the code assigned to him, the control word, in the code area 9, on the mail items to be directed to him, insofar as they have to be converted, prior to sending the order forms or instruction forms to his clients, the senders of said mail items directed to him. On participation, a code is issued to each user of the conversion facility, which code said user has to use as control code 9 and is moreover entered by the manager of the conversion facility in the memory device 14 as a selection word. If, therefore, the mail item 1 is a form which has to be transmitted to one of these addressees in the form of an electronic message, the control word of the code area 9 will correspond to one of the selection words stored in the memory device 14. The control word is therefore compared with the selection words in the memory device 14 and, after the selection word which corresponds to the control word has been found, the mail item is transported to a conversion device 16. In said conversion device 16, the message on the back of the order card 1 is, if possible, converted into a corresponding electronic message which is then sent by electronic means. In the conversion device 16, a video picture is taken of the back of the order card, after which the video signal is processed by means of one or more algorithms in a manner such that a binary signal results therefrom. The message 4 on the mail item 1 comprises, as stated, several areas. In fact, the areas 5, 6 and 7 are of importance in this case, while the other information is in fact superfluous. This redundant information may, however, in fact serve as a control, or in case of doubt - such as in the case of an unclearly written order number - give a decisive indication of the information which is in fact of importance. The message 4 does not therefore have to be completely converted as well, but it is possible to make do with conversion of the said areas 5, 6 and 7. Of these areas, the area 5 may already be provided by the sender (for example, the mail order company) with, for example, a sender code in OCR script or in bar code. Said area can therefore be converted in a comparatively simply manner, i.e. using a comparatively simple algorithm, into a binary message. The areas 6 and 7 are, on the other hand, normally filled in manually or, at best, with the aid of a typewriter. The conversion of these areas into a corresponding electronic message requires a fairly complex algorithm, while the possibility of error is higher. For this reason it may be desirable to process these two areas 6 and 7 two or even three times (and to "poll" the results), as a result of which the quality of the conversion increases. It is also possible to use an error correction algorithm in the forming of the article number series by the addressee (mail order company), as a result of which each article number has to satisfy a particular, for example mathematical, criterion if it is to be a valid article number. The conversion parameters (c) which are needed for these conversion operations and which indicate, for example, which areas have to be read out and converted, and also the algorithms to be used in this process (for, for example, OCR script or handwritten script respectively) and also the parameters

which are necessary for carrying out a validation operation to check the conversion such as was indicated as an example, (can be) are extracted from the data base in the memory device 14. These parameters are related to the selection word concerned. The selection word therefore also fulfils in this case the function of parameter code with the aid of which the conversion parameters are set.

After the conversion of the message 4 into a corresponding electronic message containing the most relevant information has been carried out in this way by means of processing the signals of a video picture, said electronic message can be transmitted to the original addressee. It is also possible not to transmit the electronic message to the original addressee, such as the mail order company, but to another organisation which is indicated by said original addressee. The transmission parameters (t), on the basis of which the message is transmitted, are extracted, like the conversion parameters, from the data base in the memory device 14. Said transmission parameters (t) thus indicate the address to which the electronic message has to be transmitted. Furthermore, said transmission parameters may also set the message "format", the transmission protocol and the transmission speed and the like. The transmission of the electronic message takes place by means of a transmission device 17 which is connected to a transmission medium 18, for example a public data network, via which the message is transmitted to the original addressee 19 or another recipient 20, indicated by said addressee 19, for example an organisation which is responsible, at the expense of the addressed recipient 19 (for example, a mail order company), for delivering the goods ordered. In this case, the electronic message is sent both to the addressee 19 and to the organisation 20 indicated by the latter, and, for example, the invoicing takes place at the premises of the addressee 19 and the organisation 20 is responsible for delivering and shipping the goods. After the mail item 1 has been converted in the conversion device 16 into an electronic message e, the mail item 1 can, as shown in the figure, again be included in the mail process and be sent to the addressee 19 by means of the means 15 intended for transmitting mail items further. In said Figure 2, the route of the physical mail item 1 is indicated by means of the letter f, while the route of the electronic message is represented by the letter e.

If an order card 1 enclosed by an envelope is used, said envelope must, of course, in fact be removed prior to the message conversion. In that case, it is advisable for the control code 9 to indicate solely that the message content has to be converted; after said control code 9 has been detected, the envelope is then taken out of the regular mail flow and routed to a location (inside or outside the same routing centre 11) where the further processing takes place. Said further processing consists in the removal of the envelope 1a and the conversion of the message 4. Before the message can be converted, the conversion parameters, inter alia, relating to the position and the nature of the areas 5, 6 and 7 to be converted, have to be set.

Figure 3 shows diagrammatically the processing of such forms inserted in an envelope, the detection of the control code taking place in the selection device 13 and the selection of the parameters to be used in the conversion and transmission taking place in a second selection device 13a. In said second selection device 13a, the conversion parameters (and transmission parameters) can be derived from the code area 5; a condition in this connection is in fact that said area is situated in the same position in all the (types of) forms to be converted, so that the parameter codes can always be read out in the same position from the code area 5 in the second selection device 13a. In Figure 1 the sender code already mentioned is represented in the code area 5 by the left-hand code section "5555"; the (in this exemplary embodiment, combined first and second) parameter code is represented by the right-hand code section "3333333". In the way already discussed, the parameter code read out from the code area 5 is compared with the selection words (s) of the table stored in the memory device 14 and, after agreement of the parameter code with one of the selection words, the associated conversion and transmission parameters are set, after which the conversion and then the transmission of the message 4 takes place.

Claims

1. Mail processing system for processing physical mail items, such as letters, forms and the like, intended for a recipient by a sender, which mail items incorporate control words, such as the address of the recipient, intended for the mail processing, and which mail items incorporate, moreover, a message intended for the recipient of the mail item, the mail items being presented via presentation means intended therefor to a public mail routing system having one or more consecutive mail routing centres where at least some of the control words are read out from the mail items presented at those points, and when a particular, single or multiple control word (2, 9) occuring on a mail item is detected, the message (4) intended for the recipient (19) of said mail item is at least partly read out and converted into an

electronic message (e).

2. Mail processing system according to Claim 1, characterised in that the control word (2, 9) detected in the mail routing centre (11) is compared with one or more selection words (s), and in the event of agreement, the message (4) or a part thereof is read out and converted into an electronic message (e).

3. Mail processing system according to Claim 1, characterised in that the electronic message (e) is transmitted to the recipient concerned (19, 20) via an electronic transmission medium (18).

4. Mail processing system according to Claim 1, characterised in that the electronic message (e) is transmitted to another recipient (20) indicated by the recipient (19) concerned via an electronic transmission medium (18).

5. Mail processing system according to Claim 2, characterised in that the said control word (9) to be compared with the selection words (s) is provided on the mail item (1) in the form of a machine-readable code.

6. Mail processing system according to Claim 5, characterised in that the control word (9) to be compared with the selection words (s) is provided on the mail item in the form of an optical bar code.

7. Mail processing system according to Claim 1, characterised in that the message (4) intended for the recipient (19, 20) is shown at least partly (5) in machine-readable code script.

8. Mail processing system according to Claim 1 or 2, characterised in that the message (4) or a part (5, 6, 7) thereof is converted by conversion means (16) into a corresponding electronic message (e) by means of a conversion process, one or more conversion parameters (c) of which are derived from a first parameter code.

9. Mail processing system according to Claim 8, characterised in that one or more conversion parameters (c) indicate the position of the message parts (5, 6, 7) being of importance for the conversion.

10. Mail processing system according to Claim 8, characterised in that one or more conversion parameters (c) relate to the conversion algorithms to be used in the conversion of the message (4) or message parts (5, 6, 7).

11. Mail processing system according to Claim 8, characterised in that one or more conversion parameters (c) relate to a control algorithm for determining whether the conversion has been carried out correctly or incorrectly.

12. Mail processing system according to Claim 11, characterised in that one or more conversion parameters (c) relate to an error processing process for processing incorrectly converted messages (4) or message parts (5, 6, 7).

13. Mail processing system according to Claim 1 or 2, characterised in that the converted electronic message (e) is transmitted by means of a transmission device (17) under the control of one or more transmission parameters (t) which are derived from a second parameter code.

14. Mail processing system according to Claim 8 or 13, respectively, characterised in that the first or second parameter code, respectively, is derived from the control word (9).

15. Mail processing system according to Claims 7 and 8, or Claims 7 and 13, respectively, characterised in that the first or second parameter code, respectively, is derived from the message part (5) shown in machine-readable code script.

16. Mail processing system according to Claim 14 or 15, respectively, characterised in that the various first or second parameter codes, respectively, are stored together with their associated conversion parameters (c) or transmission parameters (t), respectively, in a memory device (14), and in that said conversion or transmission parameters, respectively, are read out from said memory device on the basis of the respective first and second parameter code, respectively, derived from the control word (9) or from the message (4) of the mail item (1), respectively, and are used in the conversion or transmission, respectively.

17. Mail processing system according to Claim 13, characterised in that the first and the second parameter code are combined to form one parameter code.

18. Mail processing system according to Claim 1, characterised in that the said mail items (1) are formed by instruction forms for the purpose of giving instructions to the recipient (19, 20) concerned by means of filling them in, the filled-in

instructions being converted into an electronic message (e).

Patentansprüche

1. Postverarbeitungssystem zur Verarbeitung von physischen Postgütern (1) wie Briefen, Formularen und dergleichen, die von einem Absender für einen Empfänger bestimmt sind, wobei die Postgüter Leitwörter wie die Adresse des Empfängers aufweisen, die zur Postverarbeitung dienen, und wobei diese Postgüter ausserdem eine Mitteilung aufweisen, die für den Empfänger des Postguts bestimmt ist, indem die Postgüter über dafür bestimmte Vorlegemittel einem öffentlichen Postleitsystem vorgelegt werden, das ein oder mehrere aufeinanderfolgende Postleitzentren umfasst, in denen mindestens einige der Leitwörter von den an diesen Punkten vorgelegten Postgütern abgelesen werden, und wenn ein besonderes Einzel- oder Mehrfachleitwort (2, 9), das sich auf einem Postgut befindet, festgestellt wird, die für den Empfänger (19) bestimmte Mitteilung (4) zumindest teilweise abgelesen und in eine elektronische Mitteilung (e) umgewandelt wird.

2. Postverarbeitungssystem nach Anspruch 1, **dadurch gekennzeichnet, dass** das im Postleitzentrum (11) festgestellte Leitwort (2, 9) mit einem oder mehreren Wahlwörtern (s) verglichen wird, und dass bei einer Uebereinstimmung die Mitteilung (4) oder ein Teil davon abgelesen und in eine elektronische Mitteilung (e) umgewandelt wird.

3. Postverarbeitungssystem nach Anspruch 1, **dadurch gekennzeichnet, dass** die elektronische Mitteilung (e) über ein elektronisches Uebermittlungsmedium (18) dem betreffenden Empfänger (19, 20) übermittelt wird.

4. Postverarbeitungssystem nach Anspruch 1, **dadurch gekennzeichnet, dass** die elektronische Mitteilung (e) über ein elektronisches Uebermittlungsmedium (18) an einen andern vom betreffenden Empfänger (19) bezeichneten Empfänger (20) übermittelt wird.

5. Postverarbeitungssystem nach Anspruch 2, **dadurch gekennzeichnet, dass** das mit den Wahlwörtern (s) zu vergleichende Leitwort (9) in Form eines maschinenlesbaren Codes auf dem Postgut (1) angebracht ist.

6. Postverarbeitungssystem nach Anspruch 5, **dadurch gekennzeichnet, dass** das mit den Wahlwörtern (s) zu vergleichende Leitwort (9) in Form eines optischen Strichcodes auf dem Postgut (1) angebracht ist.

7. Postverarbeitungssystem nach Anspruch 1, **dadurch gekennzeichnet, dass** die für den Empfänger (19, 20) bestimmte Mitteilung (4) zumindest teilweise (5) in maschinenlesbarer Schrift geschrieben ist.

8. Postverarbeitungssystem nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die Mitteilung (4) oder ein Teil (5, 6, 7) davon durch Umwandlungsmittel (16) in eine entsprechende elektronische Mitteilung (e) umgewandelt wird mittels eines Umwandlungsverfahrens, bei dem ein oder mehrere Umwandlungsparamter (c) von einem ersten Parametercode hergeleitet sind.

9. Postverarbeitungssystem nach Anspruch 8, **dadurch gekennzeichnet, dass** ein oder mehrere Umwandlungsparameter (c) die Stelle der für die Umwandlung wichtigen Mitteilungsteile (5, 6, 7) bezeichnen.

10. Postverarbeitungssystem nach Anspruch 8, **dadurch gekennzeichnet, dass** sich ein oder mehrere Umwandlungsparameter (c) auf Umwandlungsalgorithmen beziehen, die bei der Umwandlung der Mitteilung (4) oder Mitteilungsteile (5, 6, 7) zu benützen sind.

11. Postverarbeitungssystem nach Anspruch 8, **dadurch gekennzeichnet, dass** sich ein oder mehrere Umwandlungsparameter (c) auf einen Steueralgorithmus beziehen, mit dem bestimmt wird, ob die Umwandlung korrekt oder unkorrekt ausgeführt worden ist.

12. Postverarbeitungssystem nach Anspruch 11, **dadurch gekennzeichnet, dass** sich ein oder mehrere Umwandlungsparameter (c) auf einen Fehlerverarbeitungsvorgang beziehen, mit dem unkorrekt umgewandelten Mitteilungen (4) oder Mitteilungsteile (5, 6, 7) verarbeitet werden.

13. Postverarbeitungssystem nach Anspruch 1 oder 2, **dadurch gekennzeichnet,** dass die umgewandelte elektronische Mitteilung (e) mittels einer Uebermittlungsvorrichtung (17) unter Steuerung durch einen oder mehrere Uebermittlungsparameter (t) übermittelt wird, die von einem zweiten Parametercode hergeleitet sind.

14. Postverarbeitungssystem nach Anspruch 8 bzw. 13, **dadurch gekennzeichnet, dass** der erste bzw. der zweite Parametercode von einem Leitwort (9) hergeleitet wird.

15. Postverarbeitungssystem nach den Ansprüchen 7 und 8 oder 7 und 13, **dadurch gekennzeichnet, dass** der erste bzw. der zweite Parametercode vom Mitteilungsteil (5) hergeleitet wird, der in maschinenlesbarer Codeschrift geschrieben ist.

16. Postverarbeitungssystem nach Anspruch 14 und 15, **dadurch gekennzeichnet, dass** die verschiedenen ersten bzw. zweiten Parametercodes zusammen mit ihren assoziierten Umwandlungsparametern (c) bzw. Uebermittlungsparametern (t) in einer Speichervorrichtung (14) gespeichert werden, und dass diese Umwandlungsparameter bzw. Uebermittlungsparameter aus dieser Speichervorrichtung gelesen werden aufgrund des ersten bzw. zweiten Parametercodes, die vom Leitwort (9) bzw. von der Mitteilung (4) des Postguts (1) hergeleitet und bei der Umwandlung bzw. der Uebermittlung verwendet werden.

17. Postverarbeitungssystem nach Anspruch 13, **dadurch gekennzeichnet, dass** der erste und der zweite Parametercode kombiniert werden, um einen Parametercode zu bilden.

18. Postverarbeitungssystem nach Anspruch 1, **dadurch gekennzeichnet, dass** die Postgüter (1) von Anweisungsformularen gebildet werden, um dem betreffenden Empfänger (19, 20) Anweisungen zu erteilen, indem jene ausgefüllt werden, wobei die eingesetzten Anweisungen in eine elektronische Mitteilung (e) umgewandelt werden.

Revendications

1. Système de traitement de courrier permettant de traiter des éléments de courrier physiques tels que des lettres, des formulaires et autres envoyés à un destinataire par un expéditeur, lesquels éléments de courrier incorporent des mots de contrôle tels que l'adresse du destinataire, lesquels sont destinés au traitement du courrier, et lesquels éléments de courrier incorporent en outre un message destiné au destinataire de l'élément de courrier, les éléments de courrier étant présentés via un moyen de présentation prévu à cette fin à un système de tri de courrier public comportant un ou plusieurs centres de tri de courrier consécutifs dans lesquels au moins certains des mots de contrôle sont lus sur les éléments de courrier présentés en ces points et lorsqu'un mot de contrôle simple ou multiple particulier (2, 9) présent sur un élément de courrier est détecté, le message (4) destiné au destinataire (19) dudit élément de courrier est au moins partiellement lu et converti en un message électronique (e).

2. Système de traitement de courrier selon la revendication 1, caractérisé en ce que le mot de contrôle (2, 9) détecté au centre de tri de courrier (11) est comparé à un mot de sélection ou à plusieurs mots de sélection et dans l'éventualité d'une correspondance, le message (4) ou une partie de celui-ci est lue et convertie en un message électronique (e).

3. Système de traitement de courrier selon la revendication 1, caractérisé en ce que le message électronique (e) est transmis au destinataire concerné (19, 20) via un support de transmission électronique (18).

4. Système de traitement de courrier selon la revendication 1, caractérisé en ce que le message électronique (e) est transmis à un autre destinataire (20) indiqué par le destinataire (19) concerné via un support de transmission électronique (18).

5. Système de traitement de courrier selon la revendication 2, caractérisé en ce que ledit mot de contrôle (9) qui doit être comparé au(x) mot(s) de sélection est prévu sur l'élément de courrier (1) sous la forme d'un code lisible à la machine.

6. Système de traitement de courrier selon la revendication 5, caractérisé en ce que ledit mot de contrôle (9) qui doit être comparé au(x) mot(s) de sélection est prévu sur l'élément de courrier (1) sous la forme d'un code à barres optique.

7. Système de traitement de courrier selon la revendication 1, caractérisé en ce que le message (4) destiné au destinataire (19, 20) est représenté au moins partiellement (5) selon une écriture de code lisible à la machine.

8. Système de traitement de courrier selon la revendication 1 ou 2, caractérisé en ce que le message (4) ou une partie de celui-ci (5, 6, 7) est convertie à l'aide d'un moyen de conversion (16) en un message électronique correspondant (e) au moyen d'un traitement de conversion, dont un ou plusieurs paramètres de conversion (c) sont dérivés à partir d'un premier code de paramètre.

9. Système de traitement de courrier selon la revendication 8, caractérisé en ce qu'un ou

plusieurs paramètres de conversion (c) indiquent la position des parties de message (5, 6, 7) qui sont dignes d'importance pour la conversion.

10. Système de traitement de courrier selon la revendication 8, caractérisé en ce qu'un ou plusieurs paramètres de conversion (c) concernent les algorithmes de conversion destinés à être utilisés lors de la conversion du message (4) ou des parties de message (5, 6, 7).

11. Système de traitement de courrier selon la revendication 8, caractérisé en ce qu'un ou plusieurs paramètres de conversion (c) concernent un algorithme de contrôle permettant de déterminer si oui on la conversion a été mise en oeuvre correctement.

12. Système de traitement de courrier selon la revendication 11, caractérisé en ce qu'un ou plusieurs paramètres de conversion (c) concernent un processus de traitement d'erreur permettant de traiter des messages convertis de façon incorrecte (4) ou des parties de message converties de façon incorrecte (5, 6, 7).

13. Système de traitement de courrier selon la revendication 1 ou 2, caractérisé en ce que le message électronique converti (e) est transmis au moyen d'un dispositif de transmission (17) sous la commande d'un ou de plusieurs paramètres de transmission (c) qui sont dérivés à partir d'un second code de paramètre.

14. Système de traitement de courrier selon la revendication 8 ou 13, caractérisé en ce que le premier code de paramètre ou le second code de paramètre est respectivement dérivé à partir du mot de contrôle (9).

15. Système de traitement de courrier selon les revendications 7 et 8 ou 7 et 13, caractérisé en ce que le premier code de paramètre ou le second code de paramètre est respectivement dérivé à partir de messages (5) représentés en écriture de code lisible à la machine.

16. Système de traitement de courrier selon la revendication 14 ou 15, caractérisé en ce que les divers premiers ou seconds codes de paramètres sont respectivement stockés ensemble avec leurs paramètres de conversion associés (c) ou leurs paramètres de transmission associés (t) dans un dispositif de mémoire (14) et en ce que lesdits paramètres de conversion ou de transmission sont respectivement lus dans ledit dispositif de mémoire sur la base respectivement des premier et second codes de paramètre respectifs dérivés à partir du mot de contrôle (9) ou du message (4) de l'élément de courrier (1) et sont utilisés respectivement lors de la conversion ou de la transmission.

17. Système de traitement de courrier selon la revendication 13, caractérisé en ce que les premier et second codes de paramètre sont combinés pour former un seul code de paramètre.

18. Système de traitement de courrier selon la revendication 1, caractérisé en ce que lesdits éléments de courrier (1) sont formés par des formulaires d'instruction dans le but de donner des instructions au destinataire (19, 20) concerné au moyen de leur remplissage, les instructions remplies étant converties en un message électronique (e).

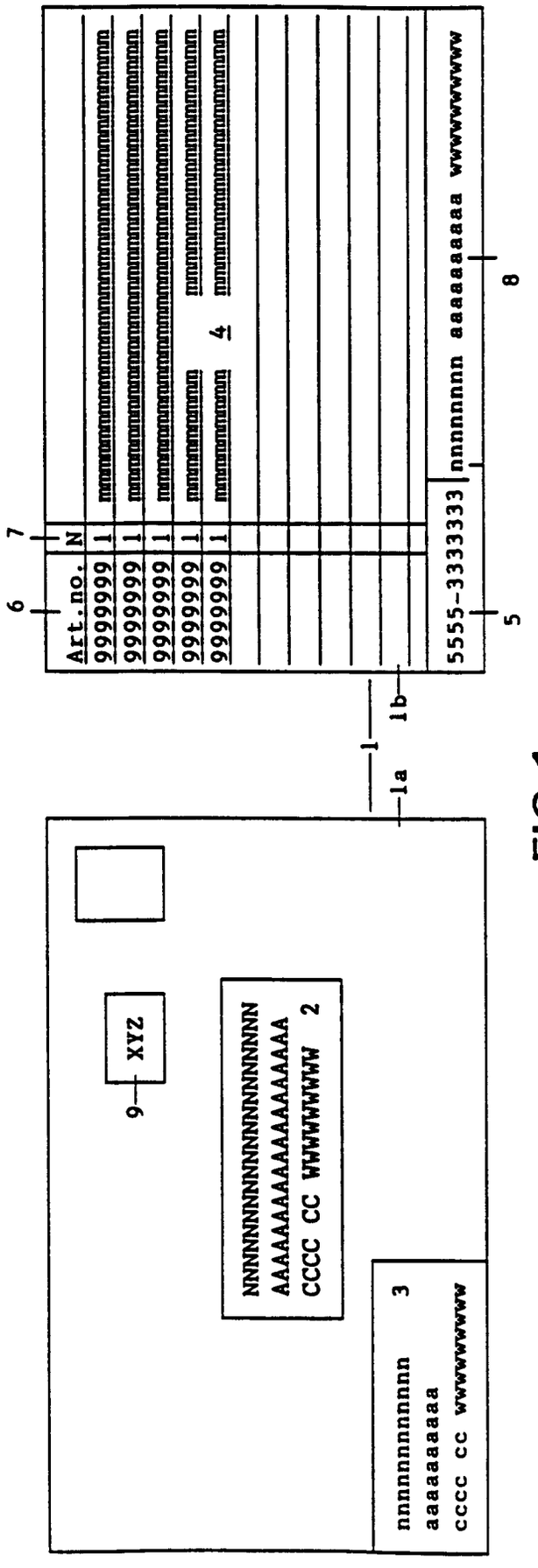
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FIG.1

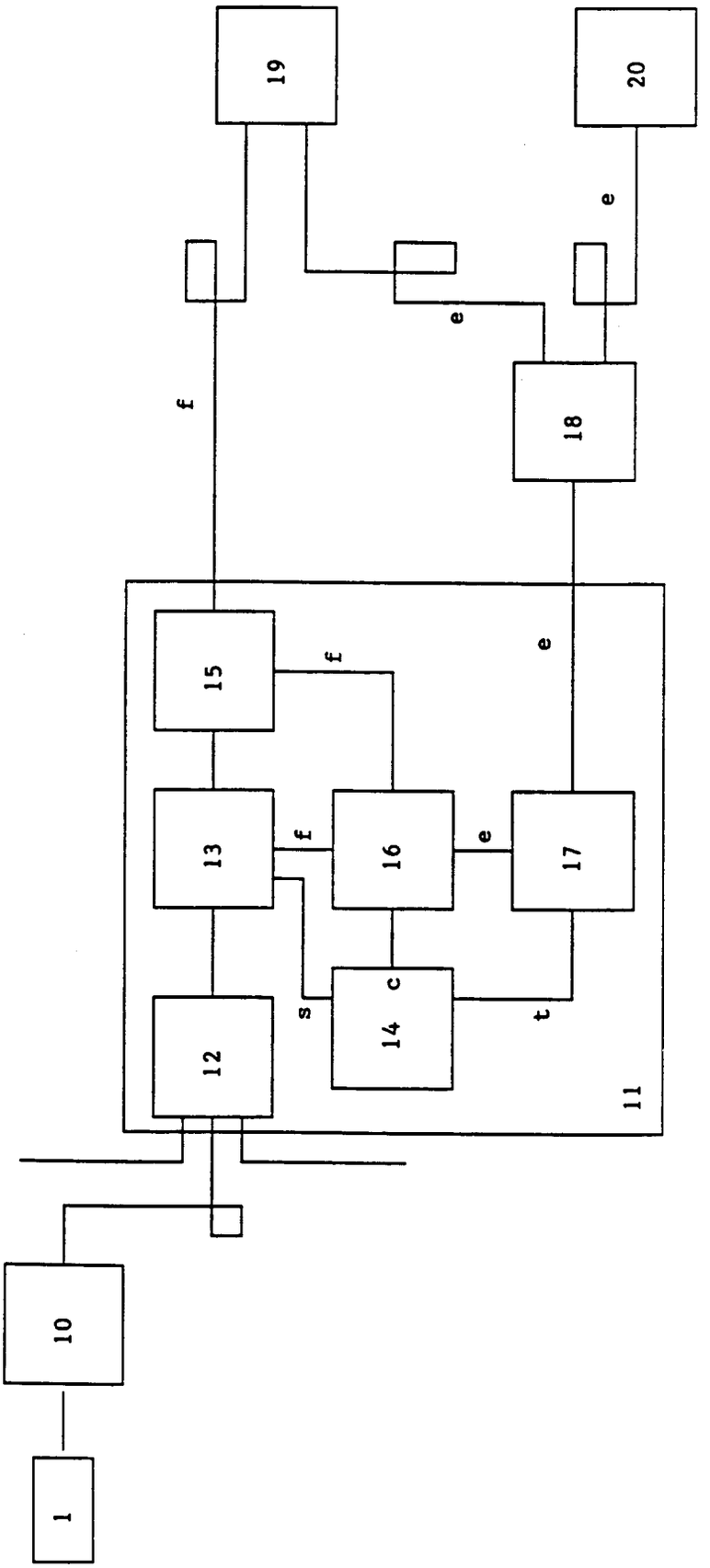

FIG.2

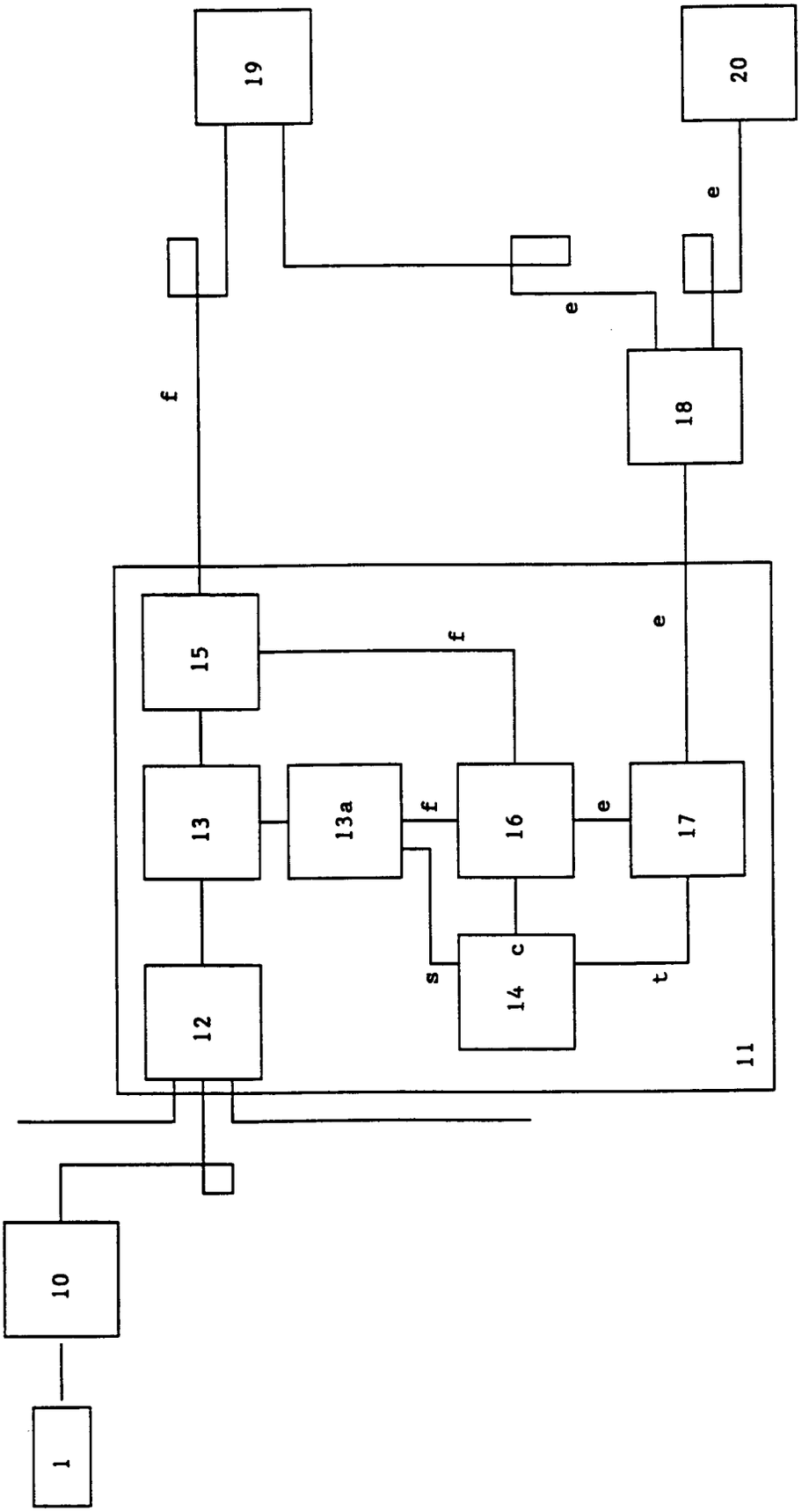

FIG.3