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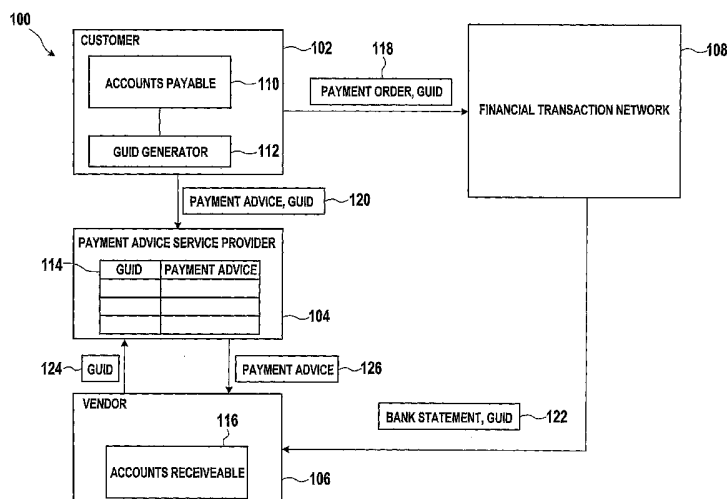
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(54) Title: DATA PROCESSING SYSTEM FOR TRANSMITTING OF PAYMENT ADVICE DATA



(57) Abstract: The present invention relates to a method of transmitting of payment advice data from a payment computer system to a payee computer system, the method comprising the steps of: - generating a payment order and of payment advice data, - generating a unique identifier for the payment order, - transmitting of the payment order and the unique identifier to a banking computer system, - transmitting of the payment advice data and the unique identifier to a central computer system, - sending of bank statement data being indicative of an execution of the payment order to the payee computer system, the bank statement data comprising the unique identifier of the payment order, - storing of the payment advice data and the unique identifier in the central computer system, - in response to a receipt of the bank statement data by the payee computer system, requesting of the payment advice data from the central computer system using the unique identifier as a key.

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Data processing system for transmitting of payment advice data

Description

Field of the invention

The present invention relates to the field of computer systems, and more
5 particularly to the processing of payment advice data.

Background and prior art

A payment advice note contains the incoming payment details required for
10 assigning and clearing the relevant open item. Typically payment advice note
headers contain the payment amount, payment date, and other information
about the payment. The advice items contain information on the paid items.
They also contain information used for identification purposes such as
document number, reference number, billing document number, customer
15 reference number, and so on. Payment advice notes are used during payment
clearing to search for and assign open items automatically. Payment advice
notes are also referred to as remittance advice notes.

Typically payment advice notes are provided from a payer to a payee by means of regular mail, e-mail or by fax. These conventional transmission methods have the disadvantage that the data contained on the payment advice notes needs to be manually re-entered into the payee's financial computer system.

- 5 Payment advice notes are not only received for incoming payments but also for outgoing payments. When a direct debiting procedure is used, the payment is initiated by the payee rather than by the payer. In this instance payment advice notes are provided from the payee to the payer.

It is also known from the prior art to transmit payment advice notes by means of
10 an electronic message, such as EDIFACT. One of the problems associated with this is that the payer needs to know the exact address of the processing entity of the financial processing system of the payee which is to receive the payment advice note in order to enable automatic processing. Another problem
15 associated with this prior art approach is that the payer needs to be aware of the exact format used by that processing entity of the payee's financial computer processing system.

There is therefore a need for an improved transmission method and system for payment advice data.

20 **Summary of the invention**

The present invention provides a data processing system that facilitates the usage of a result of a data processing operation by a computer system that has not performed the data processing operation. A first computer system generates a request for the data processing operation. The request and its
25 assigned unique identifier is transmitted to a computer system that performs the data processing operation. The result of the data processing operation is transmitted to another computer system that can perform additional data processing operations on the result. In order to facilitate further processing of the result the computer system that has requested the data processing

operation sends a request descriptor with a unique identifier of the request to a central computer system, such as a web service or a relational database.

When the computer system has received the result for further processing it queries the central computer system in order to obtain the request descriptor.

- 5 The request descriptor is then used for further processing of the result by the computer system.

The present invention is particularly advantageous as it facilitates the execution of distributed data processing tasks. The present invention can be employed for various distributed data processing systems, such as financial, logistics and
10 manufacturing control data processing systems.

For example the computer system that generates the request is an automation component that requires the performance of a certain data processing operation by an industrial control apparatus. The result of the control functionality executed by the industrial control apparatus on request is transmitted to another
15 automation component for further processing in order to execute another industrial control functionality on this basis.

In accordance with a further embodiment, the present invention provides for a method and a financial data processing system that enable to transmit payment advice data from a payer computer system to a payee computer system through
20 the intermediary of a central computer system using a unique identifier as a key. The unique identifier is communicated from the payer computer system to the payee computer system through a financial transaction network including at least one banking computer.

The payment order which is sent from the payer computer system to the
25 banking computer system includes the unique identifier as a reference. The reference is included in the bank statement which the payee receives from its bank.

The payment advice data and the unique identifier are transmitted from the payer computer system to a central computer system where the payment

- advice data is stored in a database. The payee computer system can access the payment advice data by means of the unique identifier contained in the bank statement. In response the payment advice data is transmitted from the central computer system to the payee computer system where it can be processed to
- 5 match the postings of the payee computer system. Alternatively the payer provides payment to the payee by means of a cheque. In this instance the unique identifier is given in the reference field of the cheque document. By means of a cheque the unique identifier is therefore directly communicated from the payer to the payee without the intermediary of a banking computer system.
- 10 The present invention is particularly advantageous in that it enables to use a central computer system as a hub for the payment advice data. The payment computer system can always send the payment advice data to the same central computer system without a need to know any specifics of the payee computer system and its financial processing software.
- 15 Likewise the payee computer system can request the payment advice data when the payment advice data is required by the work flow which is implemented in the payee's financial processing. The asynchronous operation of the payment computer system and the payee computer system as far as the transmission of the payment advice data is concerned is based on the usage of
- 20 a unique identifier. Preferably a globally unique identifier is used.

In accordance with a preferred embodiment of the invention the creation time of the payment advice data file is used as a basis for the generation of the unique identifier. In addition a payer and/or payee company code, account type, account number and/or other information can be used for the creation of the

25 unique identifier. Various algorithms for creating a unique identifier in accordance with the universal unique identifier (UUID) standards definition are as such known from <http://www.opengroup.org/onlinepubs/9629399/apdx.htm>. Another example is Microsoft's GUID Structure Definition (

us/cpref/html/frlrfsystemguidclasstopic.asp) the entirety of which is herein incorporated by reference.

In accordance with a further preferred embodiment of the invention the transmission of the payment advice data from the central computer system to the payee computer system is implemented as a web service in accordance with the web services architecture (<http://www.w3.org/TR/ws-arch/#wsdl>) the entirety of which is herein incorporated by reference. In this instance it is preferred that the reference of the payment order includes an identification of the web servers in addition to the unique identifier.

Like the unique identifier the identifier for the web service is included in the bank statement. This enables the payee computer system to access a web service directory in order to obtain a description of the payment advice web service. Preferably the description of the web service is contained in a WSDL file which the payee computer system receives from the web service directory. The WSDL file contains a XML scheme definition which is the basis for generating a XML request by the payee computer system in order to obtain the payment advice data from the central computer system.

In accordance with a further preferred embodiment of the invention the web service provided by the central computer system is registered in the web services directory in accordance with the universal description, discovery and integration of web services (UDDI) specification (<http://www.uddi.org/specification.html>) the entirety of which is incorporated herein by reference.

Brief description of the drawings

In the following preferred embodiments of the invention will be described in greater detail by making reference to the drawings, in which:

Figure 1 is a block diagram of an embodiment of a distributed data processing system of the invention,

Figure 2 is a block diagram of an embodiment of a data processing system of the invention,

5 Figure 3 is an object relationship diagram illustrating the flow of information for processing of a payment in accordance with an embodiment of the invention,

Figure 4 is a block diagram of an alternative data processing system of the invention using web services.

10 Detailed description

Figure 1 shows a distributed data processing system that comprises computer system 2, computer system 4, computer system 6 and computer system 8. The computer systems are coupled to a communication network, such as the Internet or another computer network. Computer system 2 has processor 28 for
15 execution of a program 30 and a program 32 that provides a user interface. For example, program 30 is an industrial control program for implementation of an industrial control functionality or an application program.

Further, processor 28 is used for execution of a program module 10 that serves as a request generator and a program module 33 that serves as a signal
20 generator for generating the signalling message 20. Program module 12 implements a generator for a unique identifier, such as for a globally unique identifier (GUID).

A request 18 that is generated by the program module 10 and its assigned unique identifier provided by program module 12 is transmitted from computer
25 system 2 to computer system 8.

The computer system 8 has a processor 34 for execution of a program 36 and a program module 38 that provides a signal generator. For example, the program

36 implements an industrial control function or program 36 is an application program.

The signalling message 20 is sent from computer system 2 to computer system 4. The signalling message 20 contains a descriptor of the request 18 and its assigned GUID. Computer system 4 has storage, such as a relational database 14 for storing the request descriptor using the GUID as a database key.

Computer system 6 is coupled to computer system 4 and computer system 8. Computer system 6 can receive the signalling message 22 from the computer system 8. The signalling message 22 carries a result descriptor that describes the result of a data processing operation performed by the program 36 in response to the request 18 and the GUID that is assigned to the request.

The computer system 6 has processor 35 for execution of a program 16 and a program module 14. For example, the program 16 implements an industrial control functionality or program 16 is an application program. Program module 40 provides a query generator that generates a query 24 for querying the database 14.

In operation program module 10 is invoked by the program 30 for generating the request 18. Alternatively program 10 is invoked manually by a user input operation that is entered via the user interface provided by program 32. The request relates to a specific data processing operation to be performed by the program 36 of computer system 8. The request 18 may contain data that specifies the data processing operation to be performed.

In addition to program module 10 the program module 12 is invoked in order to generate a GUID for the request. The GUID is transmitted from computer system 2 to computer system 8 together with the request 18.

Further, program module 33 is invoked in order to generate signalling message 20. The signalling message 20 contains a descriptor of the request 18 and the GUID of the request 18. The request descriptor may contain the same or a subset of the data of request 18 and / or it can contain a code word that describes

the data processing operation to be performed by the computer system 8 in response to the request 18. The signalling message 20 is sent before request 18 or at about the same point of time as request 18. Signalling message 20 can also be sent after request 18 has been sent to the computer system 8.

- 5 The latest point of time when the signalling message 20 can be sent from computer system 2 to computer system 4 depends on the latency time between sending the request 18 and receipt of the signalling message 22 by computer system 6. The latest point of time when signalling message 20 can be sent is the time T when the request 18 is sent by the computer system 2 plus the
- 10 latency time TL1 minus the latency time TL2, where TL1 is the latency time between sending of request 18 and receipt of the signalling message 22 and the latency time TL2 is the time between sending the signalling message 20 to the computer system 2 and storage of the request descriptor in the database 14.
- 15 In response to the request 18 the program 36 is invoked and the data processing operation as specified by the request 18 is executed. After completion of the data processing operation program module 38 is invoked in order to generate signalling message 22. The signalling message 22 is transmitted from the computer system 8 to the computer system 6. Receipt of
- 20 the signalling message 22 by computer system 6 invokes the program module 40 that generates the query 24 using the GUID received with the signalling message 22. The computer system 4 performs a database query in response to the query 24 and delivers the request descriptor 26 that describes the request that is identified by the GUID contained in the query 24. The request
- 25 descriptor 26 and the result descriptor contained in the signalling message 22 are used by program 16 in order to perform an additional data processing operation on the result.

Figure 2 shows a data processing system 100. Elements of the data processing 100 that correspond to elements of the data processing system shown in figure 1 are designated by like reference numerals having added 100.

30

Data processing 100 has computer system 102, computer system 104, computer system 106 and financial transaction network 108.

Computer system 102 belongs to a customer which needs to make a payment to a vendor. Computer system 102 has an accounts payable application component 110 which is coupled to globally unique identifier (GUID) generator component 112. GUID generator component 112 implements a method for generating of identifiers which are unique in time and space.

Preferably this is done on the basis of the creation time and date and/or other information such as the company code of the payee, i.e. the vendor in the example considered here, account type, and account number. Alternatively a universal unique identifier (UUID) in accordance with the UUID specification is generated by GUID generator component 112.

Computer system 102 can communicate with financial transaction network 108 and computer system 104 by means of a suitable protocol, such as the hypertext transfer protocol.

Computer system 104 has database 114 for storing of payment advice data received from computer system 102 and for storing of the GUIDs of the payment advice data. The payment advice data is descriptive of the requested data processing operation, i.e. payment processing to be performed by the financial transaction network 108. The payment advice data or a pointer to the payment advice data is stored in a data field of the database table; the GUID being assigned to the payment advice data is stored in a key field of the database table for retrieval of the payment advice data.

Computer system 106 has accounts receivable application component 118. Accounts receivable application component 116 serves to process bank statement data and payment advice data received from financial transaction network 108 and computer system 104, respectively. The bank statement data is a result descriptor as it describes the result of the data processing operation

performed by the financial transaction network 108, i.e. a payment provided to the payee.

Financial transaction network 108 has at least one banking computer for the execution of a payment order received from computer system 102 and for
5 providing a bank statement to vendor computer system 106.

For example, the Accounts Payable application component 110 records and manages accounting data for all vendors. It is also an integral part of the customer's purchasing system which is implemented by computer system 102: Deliveries and invoices are managed according to vendors. The purchasing
10 system automatically triggers postings in response to the operative transactions. In the same way, the purchasing system can supply a cash management application component with figures from invoices in order to optimise liquidity planning.

Payables are paid with the Accounts Payable application component 110 .
15 Preferably, this supports all standard payment methods (such as checks and transfers) in printed form as well as in electronic form (data medium exchange on disk and electronic data interchange) as well as country-specific payment methods.

Postings made in Accounts Payable application component 110 are
20 simultaneously recorded in a general ledger where different general ledger accounts are updated based on the transaction involved (payables and down payments, for example). Further, it can comprise due date forecasts and other standard reports that can be used to monitor open items.

In contrast, the Accounts Receivable application component 116 records and
25 manages accounting data of all customers. It can be an integral part of a sales management system implemented by computer system 106.

For example, all postings in Accounts Receivable application component 116 are also recorded directly in a general ledger of computer system 106. Different general ledger accounts are updated depending on the transaction involved (for

example, receivables, down payments, and bills of exchange). Preferably, the sales management system contains a range of tools that can be used to monitor open items, such as account analyses, alarm reports, due date lists, and a flexible dunning program. The correspondence linked to these tools can
5 be individually formulated to suit various accounting requirements. This is also the case for payment notices, balance confirmations, account statements, and interest calculations.

Preferably Accounts Receivable application component 116 implements a range of tools available for documenting the transactions that occur in Accounts
10 Receivable, including balance lists, journals, balance audit trails, and other standard reports. When drawing up financial statements, the items in foreign currency are re-valued, customers who are also vendors are listed, and the balances on the accounts are sorted by remaining life. For example, Accounts Receivable application component 116 can also provide the data required for
15 effective credit management, as well as important information for the optimisation of liquidity planning.

Preferably the Internet is used as a communication medium at least for the communication between the computer system 102, computer system 104 and computer system 106. The Internet can also be used as a communication
20 medium between computer system 102, financial transaction network 108 and computer system 106. However for security reasons it is preferred to use EDI or another secure communication path at least for sending of the payment order from computer system 102 to financial transaction network 108.

In operation accounts payable application component 110 generates a payment
25 order for providing payment for a number of open payment items to a payee, i.e. a vendor. Accounts payable application component 110 invokes GUID generator component 112 which in response provides a GUID. This GUID is assigned to the payment order which has just been created by accounts payable application component 110.

The payment order and its GUID are transmitted as file 118 from computer system 102 to financial transaction network 108. For example the GUID is entered into a reference data field in an electronic payment order form which is supported by financial transaction network 108.

- 5 In addition accounts payable application component 110 generates payment advice data for the payment order. The payment advice data and the GUID of the payment order are transmitted from computer system 102 to computer system 104 as file 120. For example file 120 is an XML file which is sent by means of a hypertext transfer protocol (HTTP) POST or PUT request to
10 computer system 104.

- In response computer system 104 stores the payment advice data in a data field of database 114 and GUID in a key field of database 114 for later retrieval of the payment advice data using the GUID as a key. Alternatively not the payment advice data itself is stored in database 114 but a pointer to a
15 document containing the payment advice data which is stored in computer system 104.

- By means of financial transaction network 108 the payment order which is received as file 118 is processed. As a result payment is provided to the vendor and a bank statement is generated. The bank statement data and the GUID
20 indicated in the reference field of the payment order is transmitted as file 122 from financial transaction network 108 to computer system 106.

- This invokes accounts receivable application component 116. Accounts receivable application component 116 sends a request 124 containing the GUID to computer system 104. In response computer system 104 performs a
25 database query in database 114 using the GUID as a key. This way the payment advice data of the payment order to which the GUID is assigned is retrieved from database 114 by computer system 104. The payment advice data is transmitted from computer system 104 to computer system 106 as response 126 containing the payment advice data.

Preferably request 124 is a HTTP request which is sent from computer system 106 to computer system 104 via the Internet. Likewise response 126 is a HTTP response which is also sent via the Internet.

5 In response to the receipt of response 126 accounts receivable application component 116 can clear the open payment items indicated in the payment advice data for which payment has been received in accordance with the bank statement data contained in file 122.

Figure 3 shows an object relationship diagram in order to illustrate the flow of information for the processing of a payment and the payment advice data by way of example. In the example considered here a customer bank and a vendor bank is involved for providing the payment to the vendor.

15 In step 200 a payment transaction is initiated by an accounts payable application component of the customer computer system. This way a payment order and a GUID for identification of the payment order are generated in step 202. For example the GUID is entered into a reference data field of a standardised electronic payment order format to create a payment order file.

The payment order file containing the GUID is transmitted to the computer system of the customer's bank in step 205. In response the customer's bank computer system executes the payment order in step 206.

20

Further, a payment advice note is generated by the accounts payable application component in step 203. The payment advice note includes details of the payment items included in the payment and the GUID in order to unequivocally identify the payment.

25 The payment advice note and the GUID are transmitted from the customer computer system to provider computer system in step 204. Provider computer system stores the payment advice note and the GUID for later retrieval. Preferably the Internet is used as a communication medium between customer

computer system and provider computer system for the transmission of the payment advice note and the GUID. For example, customer computer system sends payment advice note and GUID as a HTTP POST request to provider computer system.

- 5 The execution of the payment order in step 206 is communicated from the customer's bank computer system to vendor's bank computer system where the incoming payment is entered.

This includes transmission of the data which has been entered into the reference data field of the payment order, i.e. the GUID. The incoming payment
10 is processed in step 208 by the vendor's bank computer system. In step 210 a bank statement is generated which includes the reference data field content, i.e. the GUID.

The bank statement data including the GUID is transmitted from the vendor's bank computer system to vendor computer system where the cash receipt is
15 processed by an accounts receivable application component in step 212.

In step 214 a request for payment advice data is generated by the accounts receivable application component 116. This request contains the GUID. The request is sent from vendor computer system to provider computer system. In response to receipt of the request provider computer system retrieves the
20 payment advice note which has been previously stored in step 204. This is done in step 216. The payment advice note is then transmitted from provider computer system to vendor computer system. In response to receipt of the payment advice note from provider computer system, accounts receivable application component of vendor computer system performs a matching of
25 postings and the payment advice data contained in the payment advice note in step 218.

Figure 4 shows an alternative embodiment for a data processing system for transmitting of payment advice data. Elements of the embodiment of figure 4

which are similar to elements of figures 1 and 2 have been designated by like reference numerals having added 200.

In the embodiment of figure 4 financial transaction network 308 has computer system 328 of the customer's bank and computer system 330 of vendor's bank.

- 5 The payment advice service provided by computer system 304 is implemented as a web service. The web service is registered in web services directory 332 in accordance with the UUID specification. Web services directory 332 has an entry for the payment advice web service provided by computer system 304 comprising a web service identifier and a WSDL file containing a description of
10 the web service.

The web service identifier is a key for access to the WSDL file. The WSDL file comprises an XML scheme definition for the communication between the service requestor, i.e. computer system 106, and the service provider of the web service, i.e. computer system 304.

- 15 In operation file 318 is transmitted from computer system 102 to computer system 328. Similar to file 118 (c.f. figure 2) file 318 contains a payment order and a GUID. In addition file 318 contains the web service identifier for identification of the web service provided by computer system 304. Preferably the web service identifier is also entered in the reference data field of the
20 electronic payment order form.

- Computer system 328 processes file 318 and provides payment to the vendor bank. Computer system 328 generates file 334 containing an indication of the payment, the GUID for identification of the payment and the web service identifier. File 334 is processed by computer system 330 of the vendor bank in
25 order to provide file 322 containing a bank statement and the data of the reference data field, i.e. the GUID and the web service identifier.

In response to receipt of the file 322 accounts receivable application component 316 of computer system 306 is invoked. When the web service identifier contained in file 322 is received the first time by the accounts receivable

application component 316, a request 336 is sent from computer system 306 to web services directory 332. Request 336 contains the web service identifier.

In response to request 336 web services directory 332 retrieves the WSDL file of the payment advice web service using the web service identifier contained in
5 request 336 as a key. The retrieved WSDL file is transmitted from web services directory 332 to computer system 306 as file 338.

The XML scheme definition contained in file 338 is used by accounts receivable application component 316 to generate XML request 324 which is transmitted from computer system 306 to computer system 304 by means of HTTP. In
10 response computer system 304 generates an XML response 326 containing the payment advice data and being in compliance with the XML scheme definition of the web service contained in the WSDL file 338. Hence XML response 326 can be processed fully automatically by accounts receivable application component 316 without human interaction.

15 As an alternative the web service can also be implemented as a PUSH service.

It is to be noted that computer system 304 can have the role of a central hub for providing the payment advice web service. Computer system 304 can service an unrestricted number of customer computer systems of the type of computer system 302 and it can also service an unrestricted number of vendor computer
20 systems of the type of computer system 306. Using computer system 304 as a central hub has the advantage for both customers and vendors that none of the participants needs to deal with the particulars of the financial processing systems of the involved parties. This is because the addressing which is used by data processing system 300 is generic as it relies on the GUID.

25 Implementation based on web services has the further advantage that the payment advice data is received by computer system 306 in a generic format as specified in the WSDL file 338.

It is to be noted that the present invention can also be used for a direct debiting procedure where the roles of payer and payee are interchanged, i.e. the payee

initiates the payment rather than the payer. When a direct debiting procedure is used the payment advice data is received by the payee rather than by the payer.

List of Reference Numerals

2	computer system
4	computer system
6	computer system
8	computer system
10	program module
12	program module
14	database
16	program
18	request
20	signalling message
22	signalling message
24	query
26	request descriptor
28	processor
30	program
32	program
33	program module
34	processor
35	processor
36	program
38	program module
40	program module
100	data processing system
102	computer system
104	computer system
106	computer system
108	financial transaction network
110	accounts payable application component

112	GUID generator component
114	database
116	accounts receivable application component
118	file
120	file
122	file
124	request
126	response
328	computer system
330	computer system
332	web services directory
334	file
336	request
338	file

C L A I M S

1. A data processing system comprising:

- 5 - at least one first computer system (2;102;302) having means for generating a request (18;118; 318) for initiating a data processing operation to be performed by a second computer system (8;108; 308), means for generating a request descriptor (20; 120; 320) being descriptive of the request for initiating the data processing operation,
- 10 means (12; 112; 312) for generating a unique identifier for the request, means for transmitting the request and its unique identifier to the second computer system and for transmitting a first signalling message (20;120; 320) comprising the request descriptor and the unique identifier of the respective request to a third computer system
- 15 (4;104;304),
- the second computer system having processing means (34, 36) for execution of the data processing operation as requested and means (38) for generating a second signalling message (22;122;322) to a forth computer system (6; 106; 306), the second signalling message
- 20 comprising a result descriptor (22; 122; 322) being descriptive of a result of the data processing operation and the unique identifier of the respective request,
- the third computer system having means (4;104;304) for receiving the first signalling message and means (14;114;314) for storing of the
- 25 request descriptor and the unique identifier received with the first signalling message,
- the forth computer system having means (35, 16; 116; 316) for receiving the second signalling message, means (35, 40) for generating a query for querying the third computer system using the unique
- 30 identifier received with the second signalling message, means for

receiving the request descriptor (26;126;326) from the third computer system in response to the query and means for further processing (16;116;316) for further processing of the result as described by the result descriptor using the request descriptor.

- 5 2. The data processing system of claim 1, the first signalling message and the second signalling message comprising an identifier of the third computer system, the forth computer system being adapted to use the identifier for sending the query to the third computer system.
- 10 3. The data processing system of claim 2, the third computer system implementing the web service, the identifier being a web service identifier, and the forth computer system being adapted to request web service description data (338) from a web services directory (332) in response to receipt of the second signalling message, the means for generating the query being adapted to generate the query in
15 compliance with a mark-up language scheme definition of the web service description data provided by the web services directory.
4. A method of transmitting of payment advice data from a payment computer system to a payee computer system, the method comprising the steps of:
20 - generating a payment order and of payment advice data,
 - generating a unique identifier for the payment order,
 - transmitting of the payment order and the unique identifier to a banking computer system,
 - transmitting of the payment advice data and the unique identifier to a
25 central computer system,

- sending of bank statement data being indicative of an execution of the payment order to the payee computer system, the bank statement data comprising the unique identifier of the payment order,
 - storing the payment advice data and the unique identifier in the central computer system,
 - in response to a receipt of the bank statement data by the payee computer system, requesting of the payment advice data from the central computer system using the unique identifier as a key.
- 5
5. The method of claim 4, further comprising:
- transmitting a web service identifier together with the payment order to the banking computer system,
 - including the web service identifier in the bank statement data,
 - in response to the receipt of the bank statement data, requesting of web service description data from a web services directory,
- 10
- whereby the request of the payment advice data from the central computer system is made using a mark up language scheme definition of the web service description data.
- 15
6. The method of claim 5, whereby the mark up language is XML, the web services description data is a WSDL file and the hyper text transfer protocol is used for requesting of the payment advice data from the central computer system.
- 20
7. A computer system for initiating a payment, the computer system comprising:
- means (310) for generating a payment order (318) and of payment advice data (320),
 - means (312) for generating a unique identifier for the payment order,
- 25

- means for transmitting of the payment order and the unique identifier to a banking computer system (108; 308, 328),
 - means for transmitting of the payment advice data and the unique identifier to a central computer system (104; 304).
- 5 8. The computer system of claim 7, the means for generating of the unique identifier being adapted to generate a universal unique identifier (UUID).
9. A computer system for processing of bank statement data, the computer system comprising:
- 10 - means (116; 316) for receiving of bank statement data (122; 322) being indicative of an execution of a payment order (318), the bank statement data comprising a unique identifier of the payment order,
 - means (116; 316) for generating a request for the payment advice data, the request comprising the unique identifier,
 - 15 - means (116; 316) for sending of the request to a central computer system (104; 304).
10. The computer system of claim 9 further comprising means for requesting of web service description data from a web services directory (332) in response to receipt of the bank statement data, the bank statement data including a web service identifier, the means for generating of the request being adapted to generate the request (324) in accordance with a mark up language scheme definition of the web service description data.
- 20 11. A computer system for communicating of payment advice data between a plurality of payers and the plurality of payees, the computer system comprising:
- 25 - means for receiving of payment advice data and a unique identifier being assigned thereto from each one of a plurality of payer computer systems,

- means for storing of the payment advice data and the unique identifier,
 - means for retrieval of the payment advice data using the unique identifier as a key in response to a receipt of a request from anyone of a plurality of payee computer systems, the request comprising the
5 unique identifier,
 - means for sending of the retrieved payment advice data to the one of the payee computer systems.
12. A computer program product, in particular digital storage medium, for initiating a payment, the computer program product comprising program
10 means for performing the steps of:
- generating a payment order and of payment advice data,
 - generating a unique identifier for the payment order,
 - invoking of a transfer protocol for sending of the payment order and the unique identifier to a banking computer system and for sending of the
15 payment advice data and the unique identifier to a central computer system.
13. The computer program product of claim 12, the computer program means being adapted to invoke the protocol for sending of a web service identifier to the banking computer system together with the payment order and the
20 unique identifier.
14. The computer program product of claims 12 or 13, the computer program means being adapted to generate the unique identifier as a universal unique identifier (UUID).
15. A computer program product, in particular digital storage medium, for
25 processing of bank statement data, the computer program product comprising program means for performing the steps of:

- receiving of bank statement data being indicative of an execution of a payment order, the bank statement data comprising a unique identifier of the payment order,
 - generating a request of payment advice data, the request comprising the unique identifier,
 - invoking a transfer protocol for sending of the request to a central computer system.
16. The computer program product of claim 15, the program means being adapted to match posting data and the payment advice data received from the central computer system.
17. The computer program product of claims 15 or 16, the program means being adapted to request web service description data from a web services directory in response to receipt of the bank statement data, the bank statement data comprising a web service identifier, whereby the request is generated in accordance with a mark up language scheme definition of the web service description data.
18. A data processing system for transmitting of payment advice data, the data processing system comprising:
- at least one payer computer system (302) having means (310) for generating a payment order (318) and of payment advice data (320), means (312) for generating a unique identifier for the payment order, means for transmitting of the payment order and the unique identifier to a banking computer system (108; 308, 328) and means for transmitting of the payment advice data and the unique identifier to a central computer system (104; 304),
 - the banking computer system having means for sending of bank statement data (122; 322) being indicative of an execution of the

payment order to a payee computer system (106; 306), the bank statement data comprising the unique identifier of the payment order,

- the central computer system having means (114; 314) or storing of the payment advice data and the unique identifier,
- 5 - the payee computer system having means (316) for requesting of the payment advice data from the central computer system in response to receipt of the bank statement data using the unique identifier as a key.

19. The data processing system of claim 18, the means for transmitting of the payment order and the unique identifier being adapted to transmit a web
10 service identifier to the banking computer system, the web service identifier being comprised in the bank statement data, and the payee computer system being adapted to request web service description data (338) from a web services directory (332) in response to receipt of the bank statement data, the means for requesting of the payment advice data
15 from the central computer system being adapted to send a mark up language request for the payment advice data on the basis of a mark up language scheme definition of the web service description data.

20. The data processing system of claim 19, the mark up language being XML and the web service description data being a WSDL file.

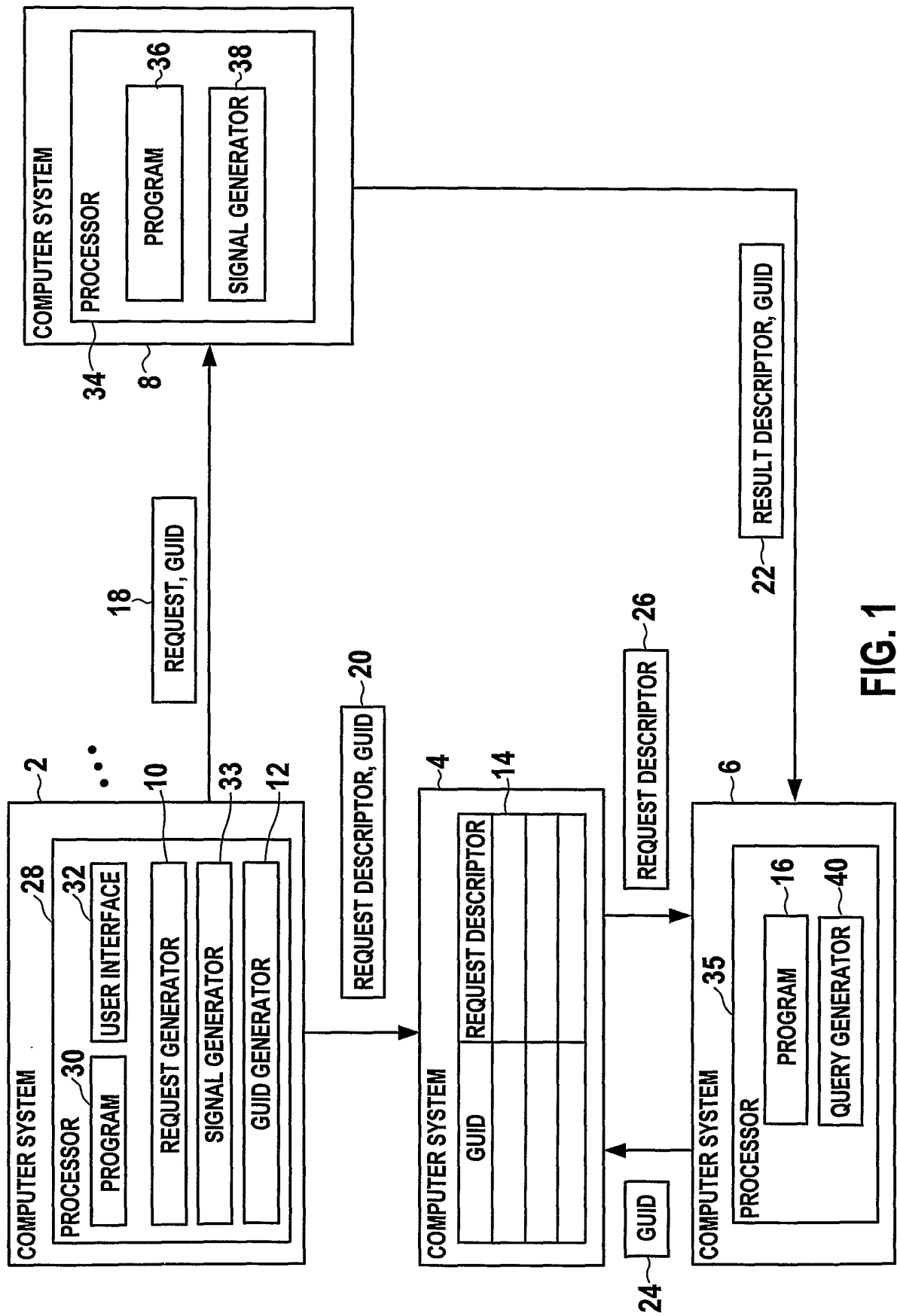


FIG. 1

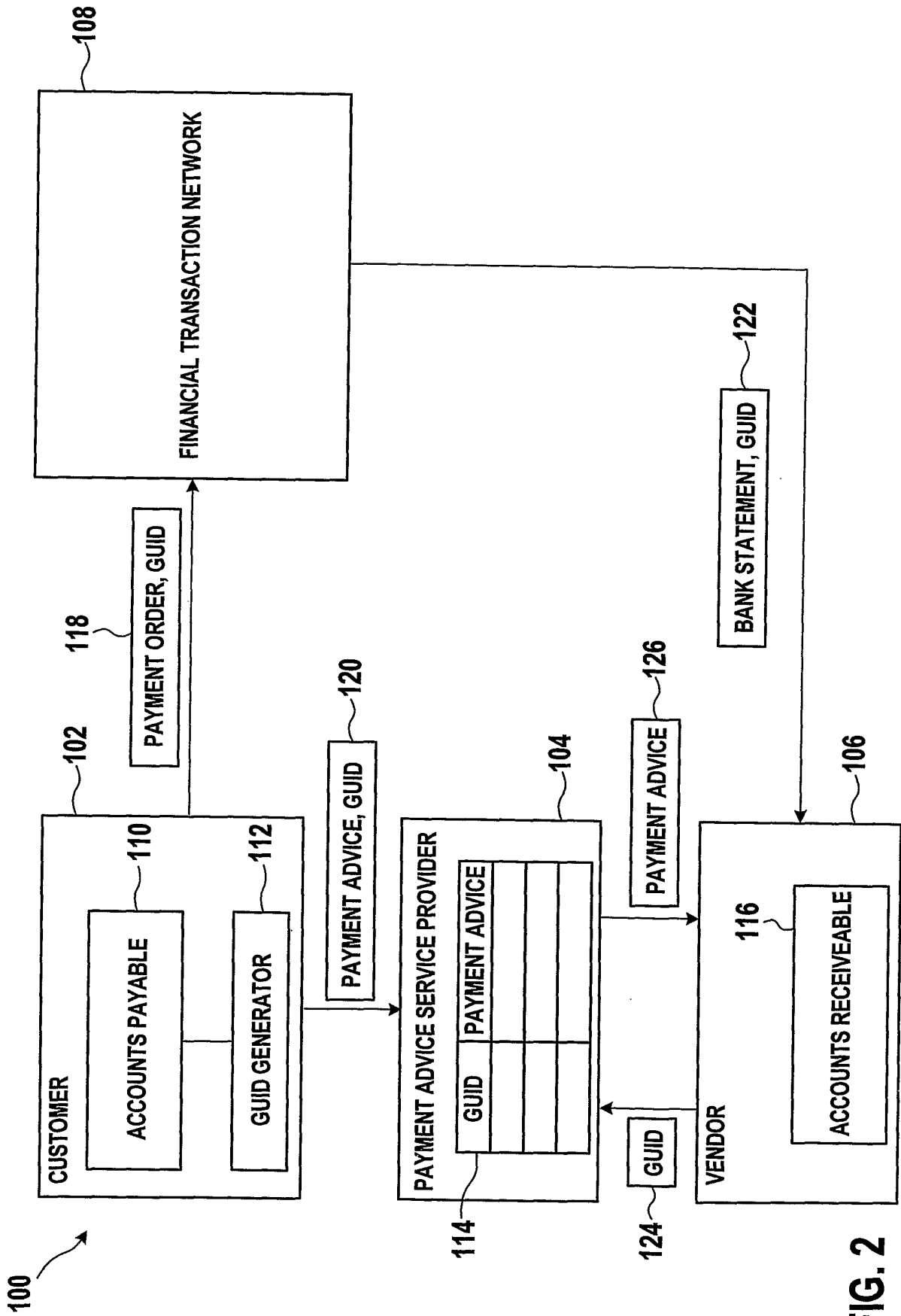


FIG. 2

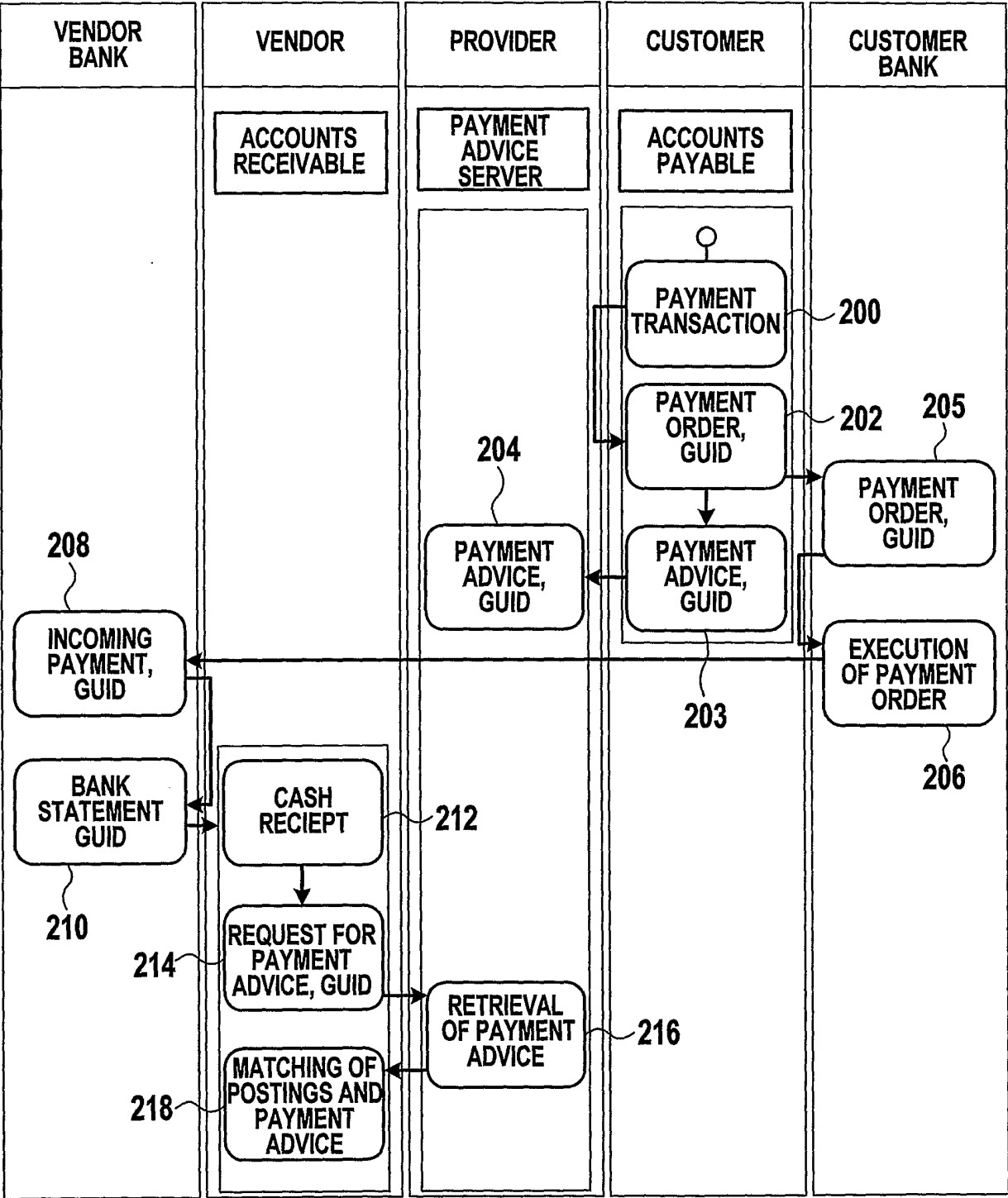


FIG. 3

4 / 4

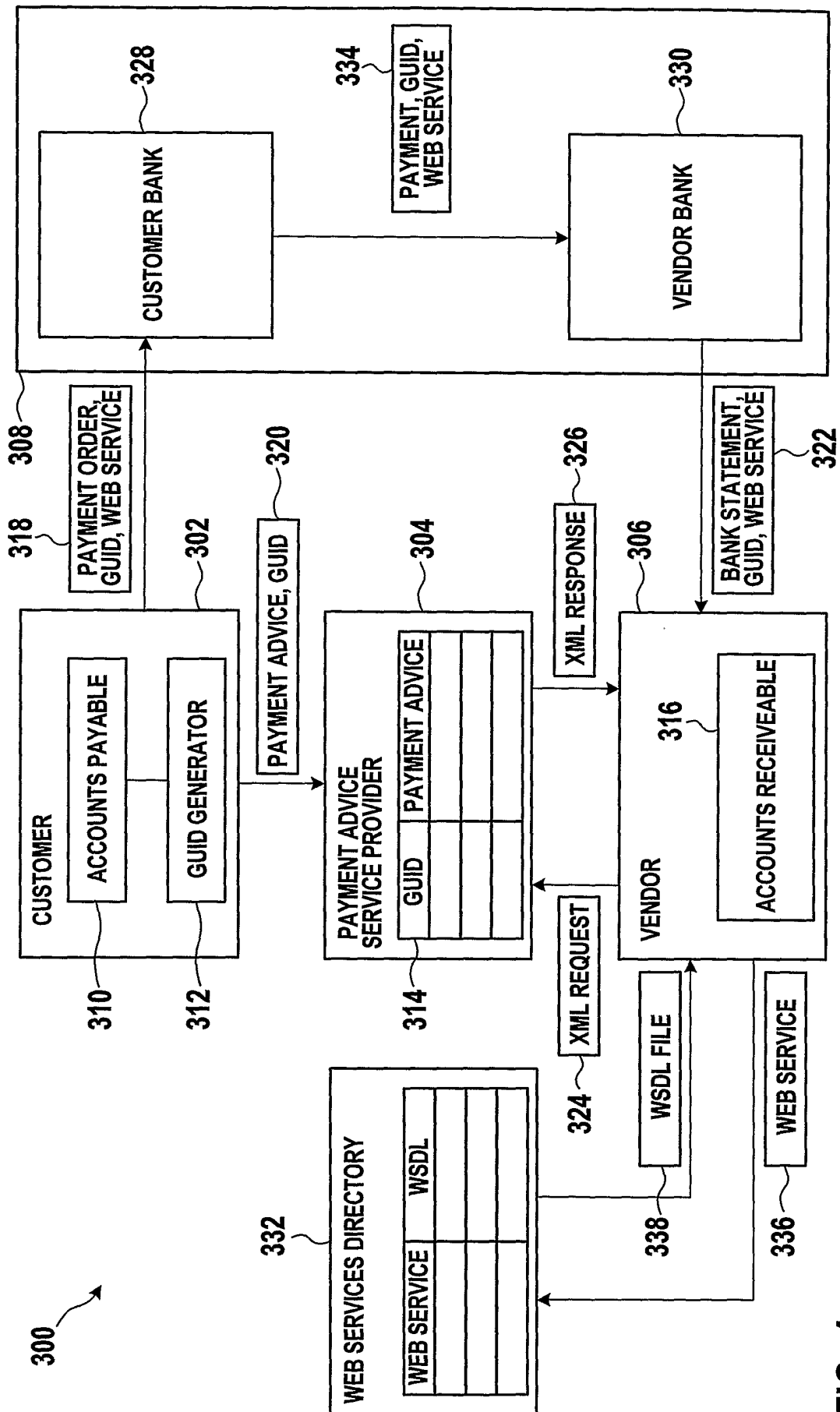


FIG. 4