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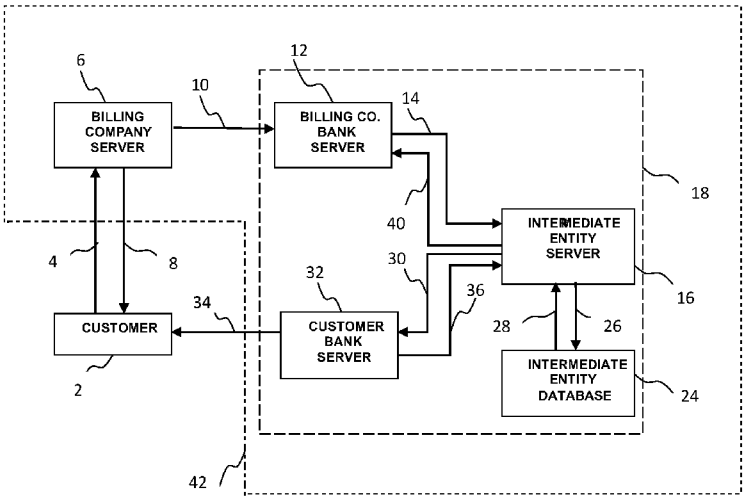


FIG.1

(57) **Abstract**: The present invention provides a payment system comprising:(i) a payer having (a) a funding account number, and (b) an alias of the funding account number (ii) a payee holding the alias of the funding account number, and (iii) an intermediate entity holding the funding account number and the alias of the funding account number in linked association, wherein the system is configured such that, in use, the payee seeks payment from the intermediate entity (or an associated entity) by reference to the alias, the intermediate entity (or an associated entity) identifies the payer funding account number by reference to the alias, and the intermediate entity (or associated entity) seeks payment from the payer's funding account.

WO 2015/000026 A1

PAYMENT SYSTEM

FIELD OF THE INVENTION

The present invention relates to systems for effecting electronic payments, and particularly payments between a customer and a biller.

BACKGROUND TO THE INVENTION

The electronic transfer of funds is now a staple of modern commerce, with financial institutions well adapted to make and receive payments for their customers. For example, many bank customers exploit facilities that allow a biller to directly debit their account for payment of utilities, insurance, automotive lease payments, mortgage payments, rent, school fees, council rates, taxes, and the like. The debit may occur regularly or sporadically, and may be of the same amount or different amounts. Billers will often provide a discount where a customer authorises direct debiting of their account.

In setting up direct debit facilities, the customer typically provides the biller with details of a bank account from which funds are drawn to settle a bill. For example, a customer might instruct their mobile telephony provider to directly debit the value of their monthly bill from their personal bank savings account.

While direct debit facilities are undoubtedly convenient, these services tend to tie a customer (be it an individual consumer or a business) to using a particular bank. Greater competition in financial services has resulted in banks competing more strongly for customers by lowering fees, improving service and offering innovative banking products. Thus, there is now a greater inclination for customers to compare the products and services of various banks. A problem arises in that customers are reticent to change banks given the need to alert a potentially large number of direct debit billers of the change in banking details.

Customers of banks may also exploit direct credit services. This involves an individual or business providing their banking details to organisations who may make regular payments to them. For example, a Tax Office may directly deposit a tax refund directly into a comapny's bank account, or a government welfare department may deposit benefits regularly into an individual's bank. When a change of banking provider occurs, these agencies must be notified and requested to update their systems/databases. Even where the payee provides new account details there is a (real or perceived) risk that payments will continue to the old bank account, causing a burden to locate and redirect the monies.

In some cases, once a customer has moved their account to a second bank, the first bank will offer to improve the offer of the second bank. The customer would typically wish to take advantage of the improved offer, however again the work and inconvenience involved in advising direct debit billers of the change dictates that many customers will simply stay with the second bank.

It is an aspect of the present invention to overcome or ameliorate a problem of the prior art by providing means for facilitating a customer moving accounts between banks. It is a further aspect to provide an alternative to prior art payment systems.

The discussion of documents, acts, materials, devices, articles and the like is included in this specification solely for the purpose of providing a context for the present invention. It is not suggested or represented that any or all of these matters formed part of the prior art base or were common general knowledge in the field relevant to the present invention as it existed before the priority date of each claim of this application.

SUMMARY OF THE INVENTION

In one aspect the present invention provides a payment system comprising: (i) a payer having (a) a funding account number, and (b) an alias of the funding account number, (ii) a payee holding the alias of the funding account number, (iii) an intermediate entity holding the funding account number and the alias of the funding account number in linked association, wherein the system is configured such that, in use, the payee seeks payment from the intermediate entity (or an associated entity) by reference to the alias, the intermediate entity (or an associated entity) identifies the payer funding account number by reference to the alias, and the intermediate entity (or associated entity) seeks payment from the payer's funding account.

In another aspect the present invention further provides a payment system comprising: (i) a payee having (a) a receiving account number, and (b) an alias of the receiving account number, (ii) a payer holding the alias of the receiving account number, and (iii) an intermediate entity holding the receiving account number and the alias of the receiving account number in linked association, wherein the system is configured such that, in use, the payer makes payment to the intermediate entity (or an associated entity) by reference to the alias, the intermediate entity (or an associated entity) identifies the payee receiving account number by reference to the alias, and the intermediate entity (or associated entity) makes payment to the payee's receiving account.

In one embodiment, the alias is issued by the intermediate entity.

In one embodiment, the alias is in a format acceptable to or specified by the payee

In one embodiment, a component of the alias is chosen by (i) the payer (when the payer is a customer transferring funds to a payee) or (ii) the payee (when the payee is a customer receiving funds from a payer).

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In one embodiment, the alias includes a code identifying a specific financial institution, such as a Bank-State-Branch number, or a functional equivalent thereof.

In one embodiment, the payer provides the alias to the payee. In this embodiment the payer may provide the alias to the payee as part of a direct debit instruction.

In one embodiment, the payee provides the alias to the payer. In this embodiment the payee may provide the alias to the payer as part of a direct credit instruction.

In one embodiment the payment system comprises means allowing the payer to specify a maximum amount for a single payment, and/or specify a maximum frequency of payment for a given payee, and/or specify approved payees, and/or specify non-approved payees.

In a further aspect, the present invention provides a method for transmitting an electronic payment from a payer to a payee, the method comprising the step of: providing the payer with an alias of the payee's funding account, wherein the alias is used to facilitate transmission of the payment from the payer's funding account to the payee bank.

In a further aspect, the present invention provides a method for transmitting an electronic payment from a payer to a payee, the method comprising the step of: providing the payer with an alias of the payee's receiving account, wherein the alias is used to facilitate transmission of the payment from the payer's funding account to the payee's receiving account.

In another aspect, the present invention provides a computer network comprising, in operable connection: (i) a payer financial institution server holding a funding account number of a payer, (ii) a payee financial institution server holding an alias of the funding account number of the payer, and (iii) an intermediate entity server holding the funding account number and the alias of the funding account number in linked association, wherein the

network is configured such that the intermediate entity server (or an associated entity server) is adapted to transmit a payment to the payee, and the payer financial institution server transmits payment to the intermediate entity (or the associated entity).

In one embodiment, the intermediate entity server has stored an alias of the funding account number or a receiving account number and a customer account number relating to a single customer.

In another aspect, the present invention provides a computer network comprising, in operable connection: (i) a payee financial institution server holding a receiving account number of a payee, (ii) a payer financial institution server holding an alias of the receiving account number of the payee, and (iii) an intermediate entity server holding the receiving account number and the alias of the receiving account number in linked association, wherein the network is configured such that the intermediate entity server (or an associated entity server) is adapted to transmit a payment to the payee, and the payer financial institution server transmits payment to the intermediate entity (or the associated entity).

In yet a further aspect the present invention provides a server adapted to facilitate transmission of an electronic payment from a payer to a payee, the server having stored a funding account number and an alias of the funding account number in linked association.

In yet a further aspect the present invention provides a server adapted to facilitate transmission of an electronic payment from a payer to a payee, the server having stored a receiving account number and an alias of the receiving account number in linked association.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention may be more fully described or clearly ascertained by reference to the accompanying drawings which show a number of preferred embodiments, and in which:

Fig. 1 is a schematic of a payment system whereby the intermediate entity is capable of handling electronic payments.

Fig. 2 is a schematic of a payment system whereby the intermediate entity is not capable of handling electronic payments. An associated entity is entrusted with execution of the electronic payments.

Fig. 3 shows a computer database structure suitable for retaining details of multiple payers, each payer entry having a funding account number, and an alias of the funding account.

DETAILED DESCRIPTION OF THE INVENTION

After considering this description it will be apparent to one skilled in the art how the invention is implemented in various alternative embodiments and alternative applications. However, although various embodiments of the present invention will be described herein, it is understood that these embodiments are presented by way of example only, and not limitation. As such, this description of various alternative embodiments should not be construed to limit the scope or breadth of the present invention. Furthermore, statements of advantages or other aspects apply to specific exemplary embodiments, and not necessarily to all embodiments covered by the claims.

Throughout the description and the claims of this specification the word “comprise” and variations of the word, such as “comprising” and “comprises” is not intended to exclude other additives, components, integers or steps.

Reference throughout this specification to “one embodiment” or “an embodiment” means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, appearances of the phrases “in one embodiment” or “in an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment, but may.

As used herein, the terms “financial institution” and “bank” are used generically to refer to an institution that is capable to receiving deposits, holding deposits and electronically transmitting payments on behalf of customers. The terms are not intended to exclude building societies, credit unions and the like.

The term “customer” is intended to mean an individual or company having an account with a financial institution and also an alias for the account. The customer may be a payer (for example where the customer has a direct debit facility with a payee). The customer may be a payee (for example where the customer has a direct credit facility with a payer).

Reference to the term “account number” should not be construed narrowly to be limited to a numeral or a string of numerals. The term is used for the sake of brevity and clarity and

unless the contrary intention is proposed may include non-numerals such as letters, symbols, spaces, punctuation marks and the like.

While this invention is described mainly by reference to concepts, process, regulatory regimes, laws and terminology used in the course of electronic commerce in Australia, it is to be appreciated that the invention may be implemented in any other country having a coordinated system for making electronic payments.

Applicant proposes that one or more problems of the prior art may be overcome or at least alleviated by systems and methods facilitating the electronic payments allowing for a banking customer to easily change banking providers. Accordingly, in a first broad aspect, the present invention provides a payment system comprising:

(i) a payer having

(a) a funding account number, and

(b) an alias of the funding account number

(ii) a payee financial institution holding the alias of the funding account number, and

(iii) an intermediate entity holding the funding account number and the alias of the funding account number in linked association,

wherein the system is configured such that, in use, the payee seeks payment from the intermediate entity (or an associated entity) by reference to the alias, the intermediate entity (or an associated entity) identifies the payer funding account number by reference to the alias, and the intermediate entity (or associated entity) seeks payment from the payer's funding account.

The present systems provide an advantage or an alternative to prior art payment systems that rely on the payee's bank being availed of a payer's actual bank account details (such as BSB number, and account number) to request funds in settlement of a bill, or to reconcile funds received by way of some regular payment schedule.

By contrast, the present systems rely on an alias of the payer's actual bank account. The alias is typically issued to the payer by an intermediate entity that retains both the payer's actual bank account number and also the alias. Thus, when a direct debit payment is sought by a third party (such as a by power utility company) referencing the alias, the intermediate entity is able to identify the actual bank account from which the funds are to be drawn from.

As an example of a practical embodiment, a customer may wish to establish a direct debit facility with a telephone company (for example). The customer provides the company with the funding account alias that is linked to their actual bank account. Thus, when a power utility bill becomes payable and the telephone company seeks to directly debit the customer's account, the company seeks and receives payment from the intermediate entity (or the associated entity). The intermediate entity seeks and receives payment from the customer's actual bank account where sufficient funds or credit are available.

In some circumstances, the intermediate entity entrusts an associated entity to handle payments. The legal and regulatory regimes applicable to electronic payment clearing systems may be a barrier to the intermediate entity fully participating in the system. Accordingly, an associated entity (such as a financial institution that already satisfies any legal or regulatory requirements) may be utilised to handle payments. In those circumstances, the associated entity typically has a unique identifier (such as a BSB number) allowing for participation in the system.

The associated entity will typically defer to information held or originated by the intermediate entity when handing a payment. The associated entity handles payments by reference to the alias of the customer account, and requires the actual account number in order to properly process a payment. In some embodiments, the associated entity does not hold any information on the customer's actual account number in which case a request is made to the intermediate entity. In other embodiments, the intermediate entity has uploaded the relevant data to the associated entity, and continues to provide incremental uploads to reflect new customer information, or to remove extant accounts.

The intermediate entity (or the associated entity) is paid by the payer bank. It will be appreciated that the intermediate entity (or associated entity) may seek payment from the payer's bank before paying the payee given the risk that the customer may have insufficient funds on account to cover the transaction. However, in many electronic payment systems (such as BESC) no checks are undertaken, with there being an assumption that payments will be honoured.

Advantageously, where the customer (payer) wishes to move their account to a different bank, it is not necessary for the power utility company to be informed of the change for the purposes of the established direct debit facility. The customer only need inform the intermediate entity of the new account details. The power utility company still seeks and receives payment from the intermediate entity (or the associated entity) by reference to the

alias as originally provided by the customer. Unique to the present system is that the intermediate entity (or associated entity) seeks and receives payment from the customer's new bank.

It will be apparent that the present systems are advantageous where more than one payee is involved. Accordingly, in some embodiments the system comprises at least 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, or 40 payees for a given payer.

Business customers may have a larger number of payees, thus some embodiments of the system comprise at least 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, or 100. Greater advantage is obtained incrementally with each unit increase in the number of billing entities within the system given the time saving afforded by the avoidance of the need to inform each billing entity of the new direct debit arrangement.

The intermediate entity (or associated entity) may be an individual, organization, association, corporation, society, or partnership. The intermediate entity (or associated entity) may be an authorised deposit-taking institution (ADI) institution, which in Australia are corporations authorised under the *Banking Act* 1959.

The intermediate entity may issue the alias upon request of a customer.

A first component of the alias typically identifies the intermediate entity. In circumstances where the intermediate entity does not handle the electronic payment, then the second component identifies the associated entity capable of handling the electronic payment. These alternative forms of the invention are disclosed in further detail *infra*.

For convenience, at least a second component of the alias may be chosen by the customer, and may comprise an easily remembered string of characters such as a telephone number of the customer. Of course, some requested alias components may not be available if issued previously to another customer, and the customer will be required to propose an alternative.

The intermediate entity (which may or may not be capable of handling electronic payments) or the associated entity holds at least two data components: (i) the customer's actual bank

account number and (ii) the account alias. These data components are typically stored on a database owned or administered by the intermediate entity, but may in some embodiments be stored on a database owned or administered by the associated entity. A representation of exemplary database records is shown in Fig. 3 which demonstrates records held for five customers. The database records are searchable at least by the customer's alias to identify that same customer's actual bank account number.

The funding account is typically held by a bank, but may be held by any other institution capable of holding funds or on behalf of a customer such as an ADI. The funding account may be held by a credit union or a building society, or an entity capable of issuing a credit card or debit card to a customer.

In some embodiments, the funding account is a credit card account or a debit card account. Such accounts are often ultimately underwritten by banks and other financial institutions, but may be preferable for some customers given the ability to earn points, delay payment, take advantage of interest free periods, or for general budgeting purposes.

In one embodiment the alias is adapted to be acceptable to or specified by the payee bank. Thus, the identifier is preferably in a format usable by the payee bank with which to request funds in settlement of a bill. Typically, the payee's bank is a member of an electronic payment clearance system. Such systems have a set format for account numbers, with the alias of the present systems being formatted in accordance with the format of the payment system. For electronic commerce in Australia where BECS (Bulk Electronic Clearing System, also called CS2) is implemented, for example, the set format is a Bank-State-Branch (BSB) number consisting of 6 numerals, followed by a unique account number of 9 numerals. Other countries and regions will have variations of this format, with all variations being included in the ambit of the present invention.

In the present payment systems, the customer (when a payer) typically advises the payee of their alias as part of a direct debit instruction. When requested for their bank account number by the payee, the customer (when a payer) provides the alias, and not their actual account number. Thus, in one embodiment the system is devoid of the payee holding details of the payer's actual account.

A function of the intermediate entity (and in some embodiments, the associated entity) is to (i) retain a customer's actual bank account number and (ii) that same customer accounts

alias in a linked manner. Typically, this will be achieved by storing these data elements in a computer-based relational database of the types very well known to the skilled artisan.

The intermediate entity may be a financial institution (such as an Authorised Deposit-Taking Institution; ADI) that (in addition to storing a customer's actual bank account number and alias) is also capable of handling the electronic payments. Accordingly, the intermediate entity may have a BSB number (or similar identifier as provided for in countries and regions other than Australia) to allow for participation in a national electronic payment clearing house system. An example of a clearing house system operable with the present systems is BECS. In these circumstances, the payee's bank (which is a BECS participant) transmits a request for payment via BECS to the customer's bank. The payee has previously been provided with the customer account alias. Upon receipt of the payment request, the intermediate entity consults a database to identify the payer's actual account number. Once identified, the intermediate entity transmits a payment request of the payer's actual bank via BECS. Once that payment request is settled, the intermediate entity transmits payment via BECS to the billing entity's bank. An embodiment of this form of the invention is shown in Fig. 1

In another embodiment, the intermediate entity is not involved in the handling of any electronic payments but is associated with a financial institution that is a member of a clearing house system. In these circumstances, the function of the intermediate entity is to provide the customer's actual account number to the associated institution, thereby directing the financial institution to debit the payer's actual bank account. An embodiment of this form of the invention is shown in Fig. 2.

The present system may comprise a web-based interface configured to allow a user to apply an alias to an existing funding account. The web site hosting the interface will typically be the intermediate entity.

One function of the interface may be to allow the user to enter a proposed alias (or part thereof), with submission of a proposed alias sending a query to a database of existing aliases and returning a result ("acceptable" or "already taken") to the user.

The interface may allow the user to set aliases for a number of accounts, and may allow for two funding accounts to have a shared alias.

Advantageously, the interface may allow for the user to alter the number of the actual bank account from which funds are withdrawn. Inclusion of this feature further simplifies the process of changing funding banks for the customer.

The present systems may incorporate security features to minimise deliberate or accidental misuse. For example, a payer may specify a maximum amount for a single payment, and/or a maximum frequency of payment for a given payee. The system may incorporate the use of a white list (detailing approved payees) and/or a black list (detailing non-approved payees) to improve security.

The present systems are contemplated to be useful for individual customers, and also businesses wishing to have more flexibility in changing banks.

As discussed in the Background section herein, customers are reticent to change banks where they have set up direct credit facilities with payers. Accordingly, in a second broad aspect the present invention further provides a payment system comprising:

(i) a payee having

(a) a receiving account number, and

(b) an alias of the receiving account number

(ii) a payer holding the alias of the receiving account number, and

(iii) an intermediate entity holding the receiving account number and the alias of the receiving account number in linked association,

wherein the system is configured such that, in use, the payer makes payment to the intermediate entity (or an associated entity) by reference to the alias, the intermediate entity (or an associated entity) identifies the payee receiving account number by reference to the alias, and the intermediate entity (or associated entity) makes payment to the payee's receiving account.

It is to be understood that any features or advantages of the invention described herein with respect to systems whereby the payer has a funding account number, and an alias of the funding account number also apply to this aspect of the invention. For the sake of clarity and brevity those features and advantages are incorporated at this point of the specification by reference.

In a third broad aspect, the present invention provides a computer network comprising, in operable connection: (i) a payer financial institution server holding a funding account number of a payer (ii) a payee financial institution server holding an alias of the funding account

number of the payer (iii) an intermediate entity server (or an associated entity server) holding the funding account number and the alias of the funding account number in linked association, wherein the network is configured such that the intermediate entity server (or the associated entity server) is adapted to transmit a payment to the payee, and the payer financial institution server transmits payment to the intermediate entity (or the associated entity).

Various features and advantages discussed in the context of the systems of the invention are also applicable to the computer networks of the present invention. For the sake of clarity and brevity those features and advantages are incorporated at this point of the specification by reference.

Computer network embodiments are also applicable to the situation whereby the customer is capable of receiving deposits into their bank account. Accordingly, in a fourth broad aspect the present invention provides a computer network comprising, in operable connection: (i) a payee financial institution server holding a receiving account number of a payee (ii) a payer financial institution server holding an alias of the receiving account number of the payee (iii) an intermediate entity server (or an associated entity server) holding the receiving account number and the alias of the receiving account number in linked association, wherein the network is configured such that the intermediate entity server (or the associated entity server) is adapted to transmit a payment to the payee, and the payer financial institution server transmits payment to the intermediate entity (or the associated entity).

Various features and advantages discussed in the context of computer networks having a funding account are also applicable to this aspect of the present invention. For the sake of clarity and brevity those features and advantages are incorporated at this point of the specification by reference.

In a fifth broad aspect, the present invention provides a server adapted to facilitate transmission of an electronic payment from a payer to a payee, the server having stored a funding account number and an alias of the funding account number in linked association. It will be understood that such a server will be useful in embodiments of the systems described herein. Various features and advantages discussed in the context of the systems of the invention are also applicable to the servers of the present invention. For the sake of clarity and brevity those features and advantages are incorporated at this point of the specification by reference.

In a sixth broad aspect the present invention provides a method for transmitting an electronic payment from a payer to a payee, the method comprising the step of: providing the payer with an alias of the payee's funding account, wherein the alias is used to facilitate transmission of the payment from the payer's funding account to the payee bank. It will be appreciated that such methods may comprise any features and advantages discussed in the context of the systems of the invention. These features and advantages are also applicable to the methods of the present invention. For the sake of clarity and brevity those features and advantages are incorporated at this point of the specification by reference.

Those of skill in the art will appreciate that the various embodiments disclosed herein can be implemented as electronic hardware, computer software, or combinations of both. To clearly illustrate this interchangeability of hardware and software, various illustrative components and steps of the method have been described above generally in terms of their functionality. Whether such functionality is implemented as hardware or software depends upon the particular application and design constraints imposed on the overall system. Skilled persons may implement the described functionality in varying ways for each particular application, but such implementation decisions should not be interpreted as causing a departure from the scope of the invention. In addition, the grouping of functions is for ease of description.

The various embodiments disclosed herein can be implemented or performed with a general purpose processor, a digital signal processor (DSP), an application specific integrated circuit (ASIC), a field programmable gate array (FPGA) or other programmable logic device, discrete gate or transistor logic, discrete hardware components, or any combination thereof designed to perform the functions described herein. A general-purpose processor can be a microprocessor, but in the alternative, the processor can be any processor, controller, microcontroller, or state machine. A processor can also be implemented as a combination of computing devices, for example, a combination of a DSP and a microprocessor, a plurality of microprocessors, one or more microprocessors in conjunction with a DSP core, or any other such configuration.

The steps of any method or algorithm described herein can be embodied directly in hardware, in a software module executed by a processor, or in a combination of the two. A software module can reside in RAM memory, flash memory, ROM memory, EPROM memory, EEPROM memory, registers, hard disk, a removable disk, a CD-ROM, or any other form of storage medium. An exemplary storage medium can be coupled to the processor such that the processor can read information from, and write information to, the storage

medium. In the alternative, the storage medium can be integral to the processor. The processor and the storage medium can reside in an ASIC.

Various embodiments may also be implemented primarily in hardware using, for example, components such as application specific integrated circuits ("ASICs"), or field programmable gate arrays ("FPGAs"). Implementation of a hardware state machine capable of performing the functions described herein will also be apparent to those skilled in the relevant art. Various embodiments may also be implemented using a combination of both hardware and software.

The present invention will now be more fully described by reference to non-limiting embodiments.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

A customer **2** having a direct debit authority with a billing company provides an alias account number **4** to the billing company server **6** as part of a direct debit instruction. The billing company issues a bill **8** to the customer **2** and under the direct debit authority the billing company server **6** transmits transaction data **10** to the billing company's bank server **12.** The billing company's bank is a member of a Bulk Electronic Clearing System (BECS) **18**. The customer's alias account number (by reference to the BSB number) identifies an intermediate entity as the customer's bank. The intermediate entity is also part of BECS, and has a server **16** which receives the payment request **14** from the billing company bank server **12.**

The customer's actual bank account details are located by reference to a database **24** operably connected to the intermediate entity server **16.** The database **24** holds the customer's alias number and the customer's actual bank account number in linked associated such that interrogation **26** of the database **24** by the customer's alias account number returns **28** the customer's actual bank account number (including the BSB of the customer's actual bank). The customer's bank is also a member of BECS **18**. A payment request **30** is transmitted from the intermediate entity server **16** to the customer's bank server **32**. The intermediate entity server **16** transmits payment to the billing company bank server **12.**

The customer's bank server **32** issues a statement **34** to the customer **2.**

It will be noted that the system **42** of this embodiment of the invention includes each of the billing company bank server **6**, the customer bank server **32**, the intermediate entity server **16**, the intermediate entity database **24**. Data is transferred throughout the system by way of secure internet connection, with the exception of data transferred between the intermediate entity server **22** and the database **24** which is achieved by way of a local area network (LAN).

A further embodiment whereby the intermediate entity is not part of a clearing house system is shown in Fig. 2. In this circumstance, the intermediate entity is unable to participate in processing electronic payments and instead exists only as a means for identifying the customer's actual account number when provided with the customer's alias account number. This embodiment requires a financial institution to be associated with the intermediate entity. The associated financial institution is part of the clearing house system and can therefore send and receive payments between the customer's bank and the billing company bank

A customer **2** having a direct debit authority with a billing company provides an alias account number **4** to the billing company server **6** as part of a direct debit instruction. The billing company issues a bill **8** to the customer **2** and under the direct debit authority the billing company server **6** transmits transaction data **10** to the billing company's bank server **12.** The billing company's bank is a member of a Bulk Electronic Clearing System (BECS) **18**. The customer's alias account number (by reference to the BSB number) identifies an associated financial institution as the customer's bank. The associated financial institution is also part of BECS, and has a server **16** which receives the payment request **14** from the billing company bank server **12.**

The customer's actual bank account details are located by sending a request **20** to an intermediate entity server **22**, which in turn interrogates **26** a database **24** which returns **28** the actual account number. The intermediate entity server **22** then transmits the actual number to the associated financial institution server **16.** The customer's bank is also a member of BECS **18**. A payment request **30** is transmitted from associated financial institution server **16** to the customer's bank server **32**. The associated financial institution server **16** transmits payment to the billing company bank server **12**. The customer's bank server **32** issues a statement **34** to the customer **2.**

The above description of the disclosed embodiments is provided to enable any person skilled in the art to make or use the invention. Various modifications to these embodiments

will be readily apparent to those skilled in the art, and the generic principles described herein can be applied to other embodiments without departing from the spirit or scope of the invention. Thus, it is to be understood that the description and drawings presented herein represent a presently preferred embodiment of the invention and are therefore representative of the subject matter which is broadly contemplated by the present invention. It is further understood that the scope of the present invention fully encompasses other embodiments that may become obvious to those skilled in the art.

CLAIMS:

1. A payment system comprising:

(i) a payer having

(a) a funding account number, and

(b) an alias of the funding account number

(ii) a payee holding the alias of the funding account number, and

(iii) an intermediate entity holding the funding account number and the alias of the funding account number in linked association,

wherein the system is configured such that, in use, the payee seeks payment from the intermediate entity (or an associated entity) by reference to the alias, the intermediate entity (or an associated entity) identifies the payer funding account number by reference to the alias, and the intermediate entity (or associated entity) seeks payment from the payer's funding account.

2. The payment system of claim 1 wherein the alias is issued by the intermediate entity.

3. The payment system of claim 1 or claim 2 wherein the alias is in a format acceptable to or specified by the payee.

4. The payment system of any one of claims 1 to 3 wherein at least a component of the alias is chosen by the payer.

5. The payment system of any one of claims 1 to 4 wherein the alias includes a code identifying a specific financial institution.

6. The payment system of any one of claims 1 to 5 wherein the alias includes a Bank-State-Branch number, or a functional equivalent thereof.

7. The payment system of any one of claims 1 to 6 wherein the payer provides the alias to the payee.

8. The payment system of claim 7 wherein the payer provides the alias to the payee as part of a direct debit instruction.

9. The payment system of any one of claims 1 to 8 comprising means allowing the payer to specify a maximum amount for a single payment, and/or specify a maximum frequency of payment for a given payee, and/or specify approved payees, and/or specify non-approved payees.

10. A payment system comprising:

(i) a payee having

(a) a receiving account number, and

(b) an alias of the receiving account number

(ii) a payer holding the alias of the receiving account number, and

(iii) an intermediate entity holding the receiving account number and the alias of the receiving account number in linked association,

wherein the system is configured such that, in use, the payer makes payment to the intermediate entity (or an associated entity) by reference to the alias, the intermediate entity (or an associated entity) identifies the payee receiving account number by reference to the alias, and the intermediate entity (or associated entity) makes payment to the payee's receiving account.

11. A method for transmitting an electronic payment from a payer to a payee, the method comprising the step of: providing the payer with an alias of the payee's funding account, wherein the alias is used to facilitate transmission of the payment from the payer's funding account to the payee bank.

12. A method for transmitting an electronic payment from a payer to a payee, the method comprising the step of: providing the payer with an alias of the payee's receiving account, wherein the alias is used to facilitate transmission of the payment from the payer's funding account to the payee's receiving account.

13. A computer network comprising, in operable connection:

(i) a payer financial institution server holding a funding account number of a payer,

(ii) a payee financial institution server holding an alias of the funding account number of the payer, and

(iii) an intermediate entity server holding the funding account number and the alias of the funding account number in linked association,

wherein the network is configured such that the intermediate entity server (or an associated entity server) is adapted to transmit a payment to the payee, and the payer financial institution server transmits payment to the intermediate entity (or the associated entity).

14. A computer network comprising, in operable connection:

(i) a payee financial institution server holding a receiving account number of a payee,

(ii) a payer financial institution server holding an alias of the receiving account number of the payee, and

(iii) an intermediate entity server holding the receiving account number and the alias of the receiving account number in linked association,

wherein the network is configured such that the intermediate entity server (or an associated entity server) is adapted to transmit a payment to the payee, and the payer financial institution server transmits payment to the intermediate entity (or the associated entity).

15. The computer network of claim 13 or claim 14, wherein the intermediate entity server has stored an alias of the funding account number or receiving account number and a customer account number relating to a single customer.

16. A server adapted to facilitate transmission of an electronic payment from a payer to a payee, the server having stored a funding account number and an alias of the funding account number in linked association.

17. A server adapted to facilitate transmission of an electronic payment from a payer to a payee, the server having stored a receiving account number and an alias of the receiving account number in linked association.

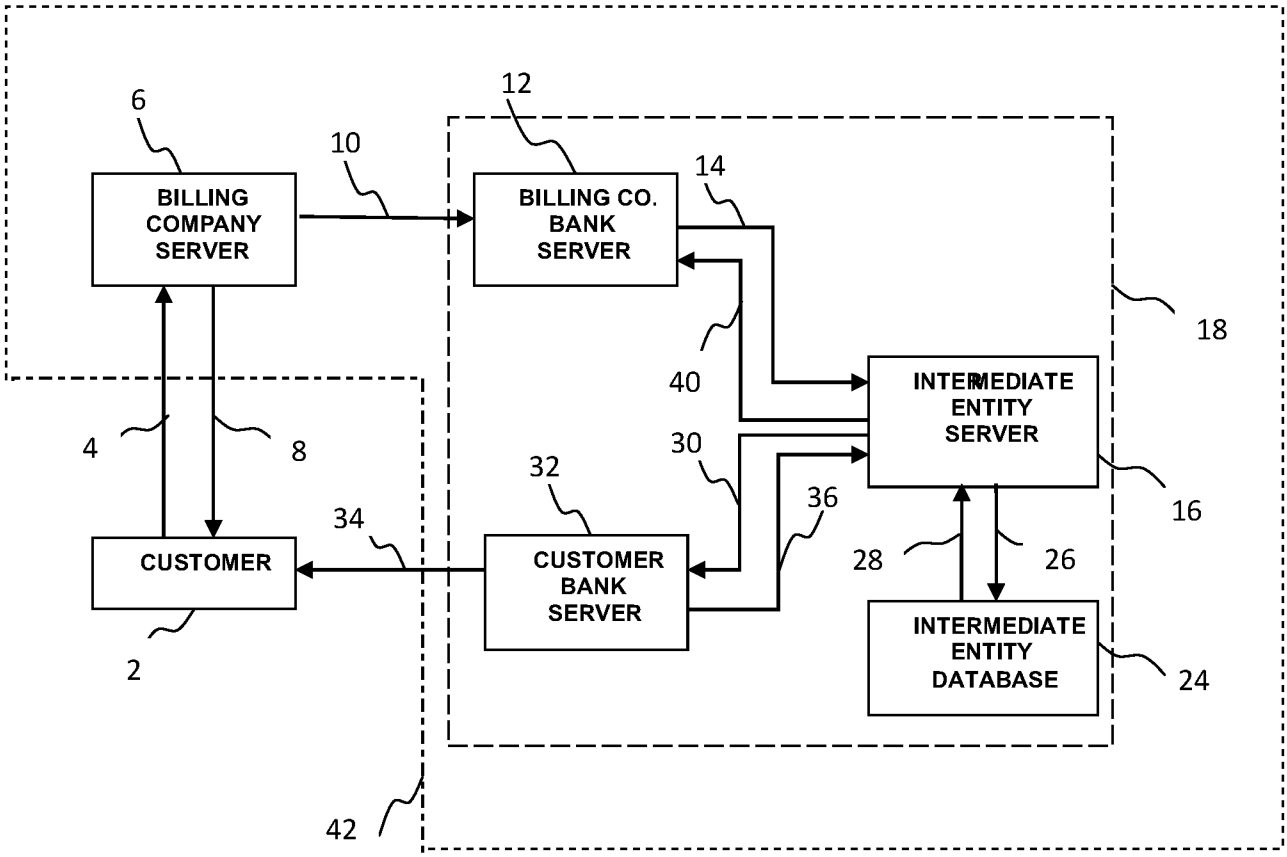

6
12
10
14
BILLING COMPANY SERVER
BILLING CO. BANK SERVER
18
40
INTERMEDIATE ENTITY SERVER
4
8
30
32
36
16
34
CUSTOMER
CUSTOMER BANK SERVER
28
26
INTERMEDIATE ENTITY DATABASE
24
2
42

FIG.1

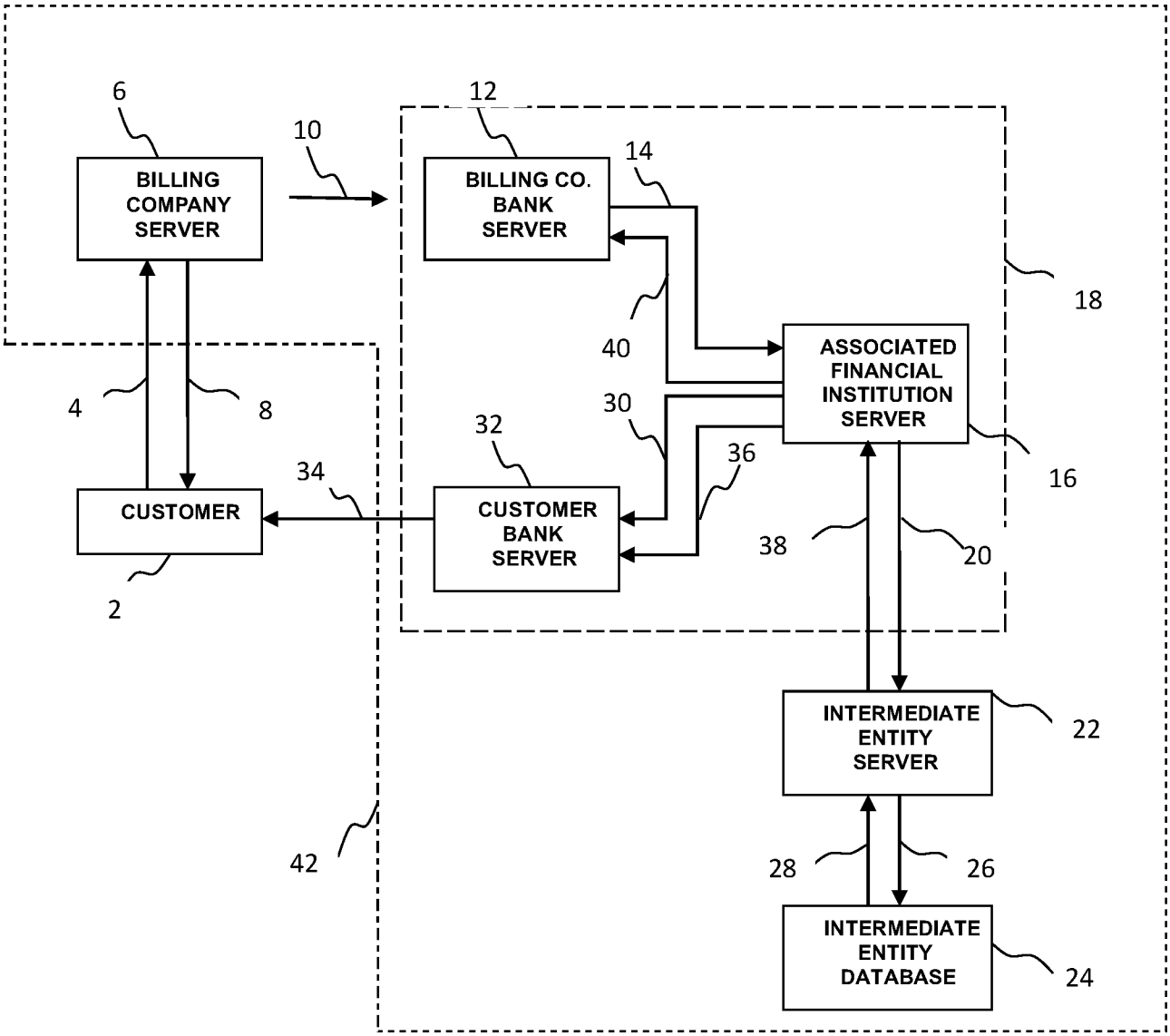

6
12
10
14
BILLING COMPANY SERVER
BILLING CO. BANK SERVER
18
40
ASSOCIATED FINANCIAL INSTITUTION SERVER
4
8
30
32
36
34
16
CUSTOMER
CUSTOMER BANK SERVER
38
20
2
INTERMEDIATE ENTITY SERVER
22
42
28
26
INTERMEDIATE ENTITY DATABASE
24

FIG.2

DATABASE RECORDS

Record	Customer Name	Account Identifier (BSB, ACCT)	Actual Bank Account Number (BSB, ACCT)
#00001	James Smith	869-412, 0424425749	013-412, 500796643
#00002	Kelly Thomas	869-412, 9428130494	985-867, 554356009
#00003	Mary Walsh	869-412, 0409213780	650-096, 232245987
#00004	Keith Manning	869-412, 0434998786	728-113, 127609634
#00005	Steven Black	869-412, 9418667984	664-192, 445568767
...	....	...	...

FIG.3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2014/050100

A. CLASSIFICATION OF SUBJECT MATTER

G06Q 20/02 (2012.01)

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, WPI (keywords: G06Q20+, alias+, Nick_name?)

The Lens (applicant inventor search)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	

[X] Further documents are listed in the continuation of Box C

[X] See patent family annex

* Special categories of cited documents:

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

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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
17 September 2014	17 September 2014
Name and mailing address of the ISA/AU	**Authorised officer**
AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA Email address: pct@ipaustralia.gov.au	Tim Yang AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No. 0262837923

INTERNATIONAL SEARCH REPORT C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		International application No. **PCT/AU2014/050100**
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2013/010115 A1 (BANK OF AMERICA CORP) 17 January 2013 see paragraphs 5, 6, 49, 52, 61, 69, 81, 94, 99	1-17
X	US 2013/0018785 A1 (DOLPHIN et al.) 17 January 2013 see the abstract in context of the whole document	1-17
X	US 2011/0055077 A1 (FRENCH et al.) 03 March 2011 see the abstract in context of the whole document	1-17
X	US 2003/0033208 A1 (MARIN et al.) 13 February 2003 see the abstract in context of the whole document	1-17

INTERNATIONAL SEARCH REPORT Information on patent family members	International application No. **PCT/AU2014/050100**

This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document/s Cited in Search Report		**Patent Family Member/s**	
Publication Number	**Publication Date**	**Publication Number**	**Publication Date**
WO 2013/010115 A1	17 January 2013	US 2013018791 A1	17 Jan 2013
US 2013/0018785 A1	17 January 2013	US 8700527 B2	15 Apr 2014
US 2011/0055077 A1	03 March 2011	AU 2010289473 A1	29 Mar 2012
		CA 2773139 A1	10 Mar 2011
		WO 2011028840 A2	10 Mar 2011
US 2003/0033208 A1	13 February 2003	AU 2002322671 A1	03 Mar 2003
		WO 03017029 A2	27 Feb 2003

End of Annex

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.