"A Method and System for Processing Transactions"

Introduction

This invention relates to a method and system for processing transactions that qualify for a refund of duty, in a system comprising a plurality of retailers each having a point of sale (POS) system, and a transaction server contactable by the POS systems, the method comprising the steps of a customer purchasing a good from a retailer, the retailer transmitting purchase details from the POS system to the transaction server, the transaction server storing the purchase details in memory, the customer obtaining a purchase record and completing the purchase record prior to submitting the completed purchase record to an authorised official, the authorised official clearing the completed purchase record if it qualifies for a refund of duty and sending the cleared completed purchase record to a transaction server operator, the transaction server operator reconciling the purchase details stored in transaction server memory with the cleared completed purchase record and issuing a refund to the customer if appropriate.

In many countries, government taxes are levied on various goods and services sold to consumers. One example of such a government levy is value added tax (VAT) which is levied on numerous disparate items from clothing and footwear to cutlery, glassware and artwork. These levies are commonly referred to as duty and the amount of duty is typically calculated based on a percentage of the sellers' price. Different duty rates may be applied to different items. Usually, the customer is offered the goods at a price inclusive of the duty. However, certain individuals are entitled to a refund of the duty paid. For example, tourists from the United States are entitled to a refund of duty paid on certain goods purchased during a visit to Ireland. The tourist is required to fill out various forms and have them approved by customs or other authorised individual for a refund of the duty to be effected.

There are three main methods of processing transactions that qualify for a refund of duty, namely the manual method, the integrated method and the integrated non-refunded in store method. The manual method requires a retailer selling goods to fill out, by hand, an appropriate tax reclamation form when a purchase is made. The

retailer gives the partially filled out tax reclamation form to the customer and the customer then fills out their details, including name and address, passport number, flight details and any other information required on the duty reclamation form and presents the completed form to a customs official at the airport prior to their departure. The customs official will stamp the form if the customer is entitled to a refund of duty and the customer then brings the stamped form to an operator that provided the form and who also works in partnership with the retailer. The operator then processes the form and issues the refund if necessary. The refund may be effected by either cheque, cash, or by crediting the customer's credit card. Typically, the refund of duty will in fact be a partial refund of the duty paid by the customer. A portion of the amount of duty paid will be retained by the operator as their fee for processing the refund and throughout the specification, when mention is made of a refund of the duty paid, this will be understood to be in most cases a partial refund of the duty.

The second method of processing transactions that qualify for a refund of duty, namely the integrated method, entails providing the retailer with a point of sale system that is capable of printing out the relevant details of the purchase on a form which must be completed by the customer and presented to customs in the normal manner prior to departure. One advantage of the integrated method is that the customer pays by credit card, and therefore the customer is charged the price of the goods, minus the duty at the point of sale. The purchase details are transmitted from the POS terminal to a transaction server where the purchase details are stored in memory. Effectively therefore, the customer obtains the duty refund at the time of the purchase and they must provide the completed duty reclamation form to customs for stamping and then subsequently provide the stamped duty reclamation form to the operator in order to avoid their credit card being recharged with the duty amount. This allows the operator to avoid having to issue a refund at some later date and significantly reduces the cost of processing the transaction.

Finally, the third method, namely the integrated method non-refund in store is similar to the integrated method. The retailer is provided with a point of sale system that prints the appropriate tax reclamation form with all the purchase details and duty information required. The retailer provides this form to the customer who then

completes the form in the normal manner before providing the completed form to a customs officer for clearance and then subsequently to an operator for a refund to be effected. However, in this instance a refund is not effected in store, but rather the refund is made subsequently on request by the customer. This is typically the case for integrated systems where a cash payment or cheque is used rather than a credit card.

There are however numerous problems with each of the known methods and systems for processing transactions. First of all, from the customer's point of view, each transaction requires paperwork which must be completed by the customer prior to submitting the completed forms to customs. This can amount to a significant amount of paperwork that must be completed by the customer prior to their departure. This is quite an onerous task as the paperwork may be in a language other than the mother tongue of the customer. Furthermore, the same details must be completed on each of the forms and therefore a lot of repetition is involved. Valuable holiday time must be spent completing these forms which is highly undesirable. There is also a possibility of the customer losing one or more of the forms during the course of the holiday and therefore being unable to reclaim duty if the details provided by the retailer are lost. Another difficulty with the known methods and systems is there are typically a number of different operators and therefore the customer must fill out several different types of forms if numerous purchases have been made. They are then also required to travel to each of the different operator's desks in the airport which may be widely dispersed throughout the airport. The requirement of having each of the documents stamped by an authorised individual may lead to significant delays which is also undesirable particularly if the customer has a flight to catch. Furthermore, the use of vast amounts of paper is seen as environmentally unfriendly.

In each of the methods and systems described, it is possible for the customer to provide their completed forms to an authorised individual in their own country if they did not have an opportunity to have the completed duty reclamation form stamped prior to their departure. However, this is still time consuming and requires the customer to complete the forms and bring them to an authorised official such as a notary public in their own country which is inconvenient. Furthermore, the completed

stamped forms must then be posted to the operator in the original country for rectification of their records which delays the refund being made in some cases and runs the risk of the completed forms getting lost in transit. Furthermore, there is a greater chance of the customer losing ones or more of the forms the longer that they have them prior to submitting them to the operator.

From the retailer's point of view, there are also numerous disadvantages with each of the known systems. In particular, the manual method requires the retailer to ensure that there is adequate stock of forms to provide to customers and the staff must spend a significant amount of time filling out the forms on behalf of the customers. This delays the processing of payments at the till creating queues and causing customer dissatisfaction. For the integrated systems, typically, a relatively bulky printer must be provided in the store which may be expensive and inconvenient to install. Furthermore, a significant amount of paper for the printer must also be provided. Finally, from the transaction server operator's point of view, the manual transactions in particular are very expensive to process, resulting in high overheads to the operator reducing the profits significantly and in some cases it is not inconceivable for the operators to provide a refund at a loss. The manual method is very time-consuming for the transaction server operator and there is a vast amount of paperwork involved with all the known methods,

WO 2006/022580 discloses a system for handling refund of sales tax. First terminals capture biometric data identifying the consumer. Computer programs link the biometric data to a consumer's purchases and store the consumer’s transactions together with the biometric data at a central database. Second terminals can capture the same biometric data of the consumer. A computer program compares the same biometric data with stored biometric data and gathers the electronic transaction(s) linked to the stored biometric data from the database. The second terminals present the gathered electronic transaction(s) for custom control.

WO 2004/081838 discloses a system for handling of refunding of value-added tax. First terminals are provided with equipment for entering purchase data. Electronic cheques are created on the basis of that data. Information carriers to be carried by a consumer have personal details for the consumer stored thereon and an identifying reference. Computer programs link the reference and electronic cheques for the person's purchases, and store the cheques together with their references in a central database. Second terminals are arranged to gather electronic cheques belonging to the references from the database for presentation for customs inspection.

WO 03/079249 discloses a tax claim system comprising a payment card system suitable for accepting payment card transactions at a point of sale, the payment card system comprising a display for displaying information to a payment card system terminal user. The tax claim system

further includes at least one data capture device for receiving card details from a payment cardholder and an indication receiving element for receiving an indication that a tax refund claim is required for a transaction. The system further provides a claim generation module for generating a tax refund claim in response to a received indication that a tax refund claim is required for a transaction and communicating this generated claim to an associated printer device.

WO 00/42546 discloses a system for recovering refundable taxes (e.g.VAT) using a transaction card to record purchases made by a traveller that are subject to VAT in a foreign country. The traveller loads the transaction card with a software application that is able to record the purchases subject to VAT. The traveller uses the card to make purchases in the foreign country, and the card calculates and accumulates the VAT subject to refund. When leaving the foreign country, the traveller inserts the card into a terminal, the software application reads the VAT subject to refund, and the traveller selects how to receive the refund.

It is an object therefore of the present invention to provide a method and system for processing transactions that qualify for a refund of duty that overcome at least some of the difficulties with the known methods and systems that is both simple to operate, relatively inexpensive to install and efficient in use.

Statements of Invention

The invention is defined in the claims.

An embodiment of the invention provides a method of processing transactions that qualify for a refund of duty, where a plurality of retailers sell goods to customers, in a system comprising a plurality of retailer point of sale (POS) systems, a transaction server having memory for the storage of purchase details sent by the POS systems on a customer making a purchase, and a remote device, wherein the transaction server is accessible by the POS systems and the remote device and has means to register customer details for a customer, the customer being provided with a unique identifier. The method comprises the steps of: a customer purchasing a good from a said retailer; a retailer POS system transmitting both the unique identifier and the purchase details to the transaction server; the transaction server storing the purchase details with the unique identifier in transaction server memory; and the customer, at the remote device, using the unique identifier to access via a customer interface of the transaction server the purchase details of each of the purchases associated with the unique identifier stored in the transaction server memory and completing a purchase record for purchases associated with the customer's unique identifier for presenting the completed record of those purchases for clearance of the record by an authorised official.

By providing each customer with a unique identifier the customer may provide the unique identifier to the retailer each time the customer makes a purchase. The details of the purchase are stored in a transaction server in the normal manner with the exception of the unique identifier being stored along with the purchase details. The retailer does not have to either manually or automatically provide a form for the customer as all the details are stored in the transaction server along with the customer's unique identifier. Therefore, the customer will not have several forms to carry with him over the duration of his holiday. Instead, the customer may access the transaction server either prior to or subsequent to departure and obtain a record of purchases from the transaction server using their unique identifier. This record may then be completed by the customer with any additional details required before the customer submits the completed record of all purchase details to an authorised official for clearance. That authorised official may be a customs officer or a notary public or other such authorised individual in their home country and the cleared completed record may subsequently be sent by the customer or the authorised official to the transaction server operator for reconciliation of the cleared completed purchase record with the purchase details stored in the transaction server memory and a refund may be issued if appropriate. The customer will only have to fill out a single set of details, rather than having to duplicate their efforts on numerous different forms. The amount of paperwork required and time and effort expended by all parties will be significantly reduced. In fact, the use of a paper form is not absolutely necessary and the record could be downloaded in electronic format, completed electronically and submitted to the authorised official electronically without printing a form. The electronic version could then be passed electronically to the transaction server for reconciliation and issuance of a refund if appropriate. Furthermore, the transaction server operator reconciling the purchase details stored in memory can, and in many instances will, be automated whereby the transaction server will process the transactions without any need for human intervention. This further reduces the overheads of processing the transaction.

In one embodiment of the invention there is provided a method of processing transactions in which the step of issuing the customer with a unique identifier comprises the initial step of the customer registering with the transaction server operator by providing the transaction server operator with customer details and the

transaction server operator thereafter associates the customer details with the unique identifier which is provided to the customer.

In another embodiment of the invention there is provided a method of processing transactions in which the customer registers with the transaction server during the initial purchase of a good. When making their initial purchase of goods in a retail outlet, the customer may at that point register with the transaction server by providing customer details to the transaction server via the POS system that will allow subsequent refunding or recharging of the customer and for the transaction server to identify the customer on all subsequent transactions.

In a further embodiment of the invention there is provided a method of processing transactions in which the customer registers with the transaction server prior to making the initial purchase of a good. This is seen as a particularly useful embodiment of the invention. In this way, the customer may pre-register with the transaction server and have their unique identifier prior to arrival in a country. This may help speed up making their first purchase and obviate any delays in the retail outlet.

In one embodiment of the invention there is provided a method of processing transactions in which the customer details provided to the transaction server are the customer's credit card details. This is seen as particularly useful as by providing the credit card details, the customer may be refunded or recharged for any duty owed to their credit card in a simple and efficient manner. This is more cost effective and reliable than having to post cheques. By providing the customer's credit card details, the customer may make purchases with cash or other form of payment and still be provided with a partial duty refund at the point of sale as the transaction server will have the customer's credit card details if it is necessary to recharge the customer subsequently for those other purchases if the customer should fail to obtain clearance in due course.

In another embodiment of the invention, there is provided a method of processing transactions in which the customer's credit card details are stored in transaction server memory. The customer's credit card details may be encrypted prior to

storage in the transaction server memory.

In a further embodiment of the invention, there is provided a method of processing transactions in which the step of issuing a refund to the customer further comprises crediting the refund to the credit card of the customer.

In one embodiment of the invention, there is provided a method of processing transactions in which the step of the customer accessing the transaction server and downloading the record of all purchase details containing their unique identifier further comprises entering the unique identifier in a separate device having access to the transaction server. In one embodiment, the device will have access to the transaction server through a dedicated communication channel. In one embodiment, the device will have access to the transaction server through a web interface. In this way, the separate device may be located remote from the transaction server and accessed over the web in order to download the purchase details associated with that customer. It is envisaged that the separate device may be a personal computer, or a dedicated kiosk which may be located in the terminal of an airport adjacent to the customs desk. By having such a kiosk, the customer may insert their unique identifier, access their record of purchase details in the airport and subsequently provide that record to the customs officials. Again, this obviates the need for the customer to have numerous forms for the duration of their stay and also obviates the need for the retailer to complete the form on their behalf either in-store in an integrated or manual fashion.

In another embodiment of the invention, there is provided a method of processing transactions in which the device has a printer connected thereto and the method further comprises the step of printing the record of all purchase details containing their unique identifier. Preferably, the record of all purchase details containing their unique identifier is printed on a single form. Furthermore, the customer may thereafter complete the printed record of all purchase details containing their unique identifier by providing any further information relating to the customer deemed necessary. In this way, the customer may access a list of all purchase details which may include the amount of the portion of duty owed to the customer, or the amount of duty already refunded and these may all be printed on a single

form which may be completed by the customer with their flight details, passport details, or any other information required, such as refund address. The customer may then present the single form to the customs officials for stamping which significantly reduces the time taken to process the applications and also reduces the amount of paperwork the customs officials must handle each and every day.

In a further embodiment of the invention there is provided a method of processing transactions in which the device has means to allow the customer insert information relating to that customer in the record of all purchases containing their unique identifier in order to complete the purchase record. In this way, the customer may complete the record of all purchases electronically. The form may then be printed out if desired, or may be sent electronically to customs officers for approval further reducing the amount of paperwork required. It is envisaged that in certain circumstances the customer details provided to the transaction server may be sufficient to populate various fields on behalf of the customer themselves, particularly if the customer has pre-registered with the transaction server. This will greatly speed up the time taken for the customer to process the transactions.

In one embodiment of the invention there is provided a method of processing transactions in which the unique identifier is stored in a memory storage device. This is seen as particularly useful and it is envisaged that the memory storage device may be a magnetic swipe card, a chip and pin card, storage device contained in a mobile phone, MP3 player, or other such device, or other memory stick or the like. In the instance of a magnetic swipe card or the chip and pin card, the customer simply must provide the card to the retailer on making a purchase. The unique identifier may be stored in the form of a numbered bar coded, magnetic stripe encoded unique identifier. Similarly, the unique identifier may be provided in a numbered, bar coded printed downloaded document. The unique identifier may be formed using the visitors passport, national ID or drivers licence or by using a combination of the nationality of the customer and a document number. The unique identifier may be stored on a numbered bar coded smart card or contactless smartcard with encoded unique identifier. The visitor's credit card itself could also be used to provide the unique identifier. Finally, the unique identifier could be a biometric detail of the customer such as a fingerprint or retina scan.

In another embodiment of the invention there is provided a method of processing transactions in which the step of the customer providing the retailer with the unique identifier comprises introducing the memory storage device to a memory storage device reader in the POS terminal. This will ensure that the customer does not have to remember a unique identifier, but instead the customer may provide the retailer with their memory storage device such as a magnetic swipe card, or chip and pin card and the retailer may swipe or insert the memory storage device into a memory storage device reader and the unique identifier will be taken electronically from the memory storage device without any further interaction from the customer. Alternatively, pin numbers or the like may be provided for additional security as will be understood in the art. In the case of biometric detail being used as the unique identifier, there may be provided a suitable device reader as part of the point of sale system in order to capture the unique identifier, such as a fingerprint reader or retina scan reader.

In a further embodiment of the invention there is provided a method of processing transactions in which the transaction server operator periodically determines those purchase details stored in memory that have not been reconciled with a cleared completed purchase record within a predetermined time limit and determines whether any duty is to be charged to the customers and thereafter charging any duty owed.

In one embodiment of the invention there is provided a method of processing transactions in which for those purchase details not reconciled within a predetermined period of time, the transaction server recharges the credit card of the customer with the value of duty refunded to date. Alternatively, the duty may be charged back to the bank account of the customer.

In another embodiment of the invention there is provided a method of processing transactions in which the retailer provides the customer with an advance refund of a portion of duty on-site on receipt of a unique identifier by a customer regardless of the mode of payment.

In a further embodiment of the invention there is provided a method of processing transactions in which the customer details provided to the transaction server are the customers billing address details. These details may be used for posting a cheque refund to the customer in the case of deferred refunds and further the address may be used for credit card or other validation if need be.

In one embodiment of the invention there is provided a system for processing transactions that qualify for a refund of duty comprising a transaction server and a plurality of retailers selling goods to customers, each of the retailers having a point of sale (POS) system, the transaction server being accessible by each of the POS systems, the transaction server having memory for the storage of purchase details sent by the POS terminals on a customer making a purchase, characterised in that:

the system further comprises means to provide each customer with a unique identifier;

the POS systems each having means to receive the unique identifier provided by the customer to the retailer on the customer making a purchase and means to send that unique identifier to the transaction server along with the purchase details, the customer unique identifier being stored in transaction server memory together with the purchase details; and

the transaction server further comprising a customer interface whereby customers may subsequently access the purchase details of each of their purchases associated with their unique identifier stored in transaction server memory through the customer interface and download a record of those purchases for clearance of the record by an authorised official.

In another embodiment of the invention there is provided a system for processing transactions in which the system further comprises a remote device providing access to the customer interface. The remote device may be a personal computing device such as a PC, laptop, PDA, Blackberry, mobile phone or other such personal computing device. It is envisaged that the remote device may be a dedicated kiosk.

In a further embodiment of the invention there is provided a system for processing transactions in which the remote device has access to the customer interface over a web interface. Alternatively, the remote device may have access to the customer interface over a dedicated communication channel, such as a stand-alone network cable.

In one embodiment of the invention there is provided a system for processing transactions in which the remote device is provided with a printer for printing a record of all purchase details associated with their unique identifier stored in transaction server memory.

In another embodiment of the invention, there is provided a system for processing transactions in which the unique identifier is stored on a memory storage device. The memory storage device may be a magnetic swipe card, chip and pin card, or other such memory storage device.

In a further embodiment of the invention, there is provided a system for processing transactions in which the POS systems means to receive the unique identifier further comprises a memory storage device reader.

In one embodiment of the invention, there is provided a system for processing transactions in which the transaction server further comprises means to record the credit card details of each customer and associate those credit card details with the unique identifier for that customer.

In another embodiment of the invention, there is provided a system for processing transactions in which the system further comprises a reconciliation module that has means to periodically review each of the purchase details stored in transaction server memory that have not been reconciled with a cleared completed purchase record after a predetermined period of time and for those purchase details that have not been reconciled, charge the customer with any unpaid duty if appropriate. Effectively, the customer will be charged the total duty that was due at the point of sale system.

In a further embodiment of the invention there is provided a system for processing transactions in which one or more of the transaction server, the transaction server memory and the POS systems are located remotely from the other of the transaction server, the transaction server memory and the POS systems.

Detailed Description of the Invention

The invention will now be more clearly understood from the following description of some embodiments thereof, given by way of example only, with reference to the accompanying drawings, in which:

Fig. 1 is a diagrammatic view of a system in which the method of processing transactions that qualify for a refund of duty is carried out;

Fig. 2 is a diagrammatic representation of a record of all purchase details used in accordance with the invention;

Figure 3 is a diagrammatic representation of an alternative record of all purchase details used in accordance with the invention; and

Figures 4(a), 4(b) and 4(c) are a flow diagram of the method of processing transactions according to the invention.

Referring to the drawings and initially to Fig. 1 thereof, there is shown a system, indicated generally by the reference numeral 1, comprising a plurality of retailers 3 each having a point of sale (POS) system 5, and a transaction server 7 contactable by each of the POS systems 5. The transaction server 7 has an accessible memory 9. The system 1 further comprises a personal computing device provided by way of a PC 11 having a printer 13 connected thereto and a kiosk 15 having a screen 17, a keyboard 19, a card reader 21 and a printer 23. The POS systems 5, PC 11 and kiosk 15 access the transaction server 7 through a communication network 25, in this case the World Wide Web.

In use, a customer (not shown) purchases one or more goods from a retailer 3. On purchasing the goods, the customer provides the retailer 3 with a unique identifier particular to that customer and the retailer 3 transmits the purchase details along with the unique identifier from the POS system 5 to the transaction server 7. The unique identifier and purchase details are stored in transaction server memory 9. The customer may make a number of such purchases over the duration of their stay. Once they have made all their purchases, the customer obtains a purchase record by accessing the transaction server 7 and downloading a record of all purchase details containing their unique identifier stored in memory 9. The customer may do this by either using the PC 11 or the kiosk 15. The customer completes the record of all purchase details containing their unique identifier and then prints the completed record. The customer then provides this completed purchase record to an authorised official such as a customs officer where the authorised official has the opportunity to examine the goods purchased along with the completed purchase record and the authorised official may then stamp the completed purchase record thereby approving any purchases that qualify for a refund of duty.

The customer or the authorised official, in this case the customs officer then sends the cleared completed purchase record to a transaction server operator which reconciles the purchase details stored in the transaction server memory with the cleared completed purchase record and issues a refund of duty to the customer if appropriate. In this way, a single record may be provided to the customs officer on a single form with all the purchase details printed out on the form along with the details completed by the customer. Preferably, the kiosk or the personal computer will allow the customer to insert their details, such as flight details, passport number or any other required information such as recharging or refund information, i.e. the manner in which duty may be charged or refunded to them as appropriate, in the form prior to printing out the completed form. Alternatively, the listed purchases may be printed out and the customer can then subsequently complete the form before handing it to customs. Either way, the customer only has to provide one form with their details inserted therein.

In order to be issued with a unique identifier the customer may pre-register with the transaction server operator prior to arrival in the country whereby they will be typically

sent a unique identifier if there is sufficient time prior to their departure. In this way, they can inform the transaction server operator of their recharging details such as credit card details that may be recharged if any duty items are refunded at the point of sale without the appropriate documentation being subsequently submitted to customs and returned to the transaction server operator.

Alternatively, the customer may be provided with a unique identifier when making their first purchase. In order to provide the customer with a unique identifier when the customer is making an initial purchase, the customer attempts to purchase an item in the normal manner using their credit card. The retailer 3 uses the point of sale system 5 to send the customer's credit card details to the transaction server operator and the transaction server operator provides a unique identifier to that customer associated with the credit card details. It is envisaged that the unique identifier may be provided on a memory storage device such as a magnetic swipe card or a chip and pin card. In this way, when the customer is making a purchase for the first time with their credit card, the retailer 3 who is provided with a number of pre-programmed memory storage devices each with a unique identifier associated therewith, provides the customer with the memory storage device and swipes both the credit card and the memory storage device in the point of sale system so that the transaction server may associate those credit card details with the unique identifier in the transaction server memory for any subsequent transactions carried out using that unique identifier. Any subsequent transaction may be made using either cash or credit card as long as the unique identifier is provided to the retailer. The retailer may then charge the customer the amount less the duty (or more specifically, portion of duty) regardless of the mode of payment, as they are safe in the knowledge that if a unique identifier is present then there is a mechanism whereby the customer may be recharged to a credit card that has been previously provided by the customer if the appropriate documentation is not submitted through customs to the transaction server operator.

For those instances in which the customer pre-registers with the transaction server prior to making an initial purchase of a good such as over the internet and provides all of their recharging details, including any information that may be necessary for completion of a purchase record, the purchase record may be populated with their

details in order to complete the form automatically when they are generating the purchase record therefore greatly facilitating the process for them. Alternatively, a kiosk 15 or PC 11 may be provided with means to insert the information electronically.

Although in many instances it would be preferred for the customer to complete the relevant documentation prior to their departure, this may not be possible in certain circumstances. In those instances it is possible for the customer to access the transaction server using a PC via the worldwide web and using their unique identifier download the record of all purchase details from the transaction server over the World Wide Web. They may then print out this record on a printer, complete the necessary details and have that form cleared by an authorised individual such as a police officer or notary public in their home country before transmitting the cleared completed form to the transaction server operator for issuing the refund. Of course, it will be understood that it may be possible for the customer to complete the record on their PC prior to printing the record.

In those instances where the cleared completed purchase records are not provided to the transaction server operator within a pre-determined period of time, the transaction server operator has means to recharge the customers with any duty that was previously refunded to them. For instance, if the customer had made numerous transactions in which the duty was refunded to them at the point of sale, but did not subsequently obtain clearance for the purchases through customs or through an authorised individual, the duty must be recharged to the customer's credit card which was provided in the initial transaction during pre-registration or prior to the customer's arrival in the country. In order to do so the transaction server has means to search all of the purchase details stored in transaction server memory and determine those purchase details that have not been reconciled with a cleared complete purchase record after a predetermined period of time. Those transactions where clearance has not been obtained are then recharged to the credit card of the customer. Of course, if the customer subsequently provides a cleared complete purchase record, the customer's credit card may be reimbursed, or they may be reimbursed by cheque or other method.

It is envisaged that the transaction server will be provided with a web interface and that the kiosk, PC or other computing device accesses the transaction server through the web interface. This web interface may of course be provided with an adequate level of security so that the information may be secure and accessible by authorised individuals if desired. Furthermore, one or more of the POS systems may further comprise a memory device writer. In this way, transaction, and more specifically purchase details, may be stored on the memory device which also holds the unique identifier of the customer. In this way, in order to provide the purchase record to the authorised individual the customer simply has to access the purchase details stored on the memory device and provide those details to the authorised individual. The purchase details stored in memory may be provided to the authorised individual in electronic format or alternatively, the customer may print out the purchase details and provide the purchase details on a printed form if desired. The authorised official may then authorise any of the appropriate qualifying purchases and the authorised purchases may be notified to the transaction server operator who may clear the record and issue a refund if necessary. Preferably, the record will be given in an electronic format to the authorised official who may in turn authorise the transactions if appropriate and forward the authorised record onwards in an electronic format to the transaction server operator for clearance of the transactions and issuance of any refund if appropriate.

Referring to Fig. 2 of the drawings, there is shown a diagrammatic representation of a record of all purchase details form 29 for a customer. It will be understood that the following is for diagrammatic purposes only and various information may be omitted or additional information may be provided depending on the requirements of the individual jurisdiction. The record of all purchases includes a date/time field 31, a purchased item field 33, a duty, in this case VAT, rate for that purchase item field 35, a retailer field 37, a price including VAT field 39, a price excluding VAT field 41, a VAT value field 43 and a VAT charged field 45. The fields 31, 33, 35, 37, 39, 41, 43 and 45 detail the various purchases made by a customer over the course of a holiday. In the example shown, it can be seen that the customer purchased some crystal glassware from Waterford Crystal on June 26, 2006 at 2.40 pm. The VAT rate due on this purchase was 21% and the purchase price was €300.00. Of that, the price excluding VAT was €247.93 and the VAT amount charged equalled €52.07.

The VAT was charged on that purchase. Similarly, it can be seen that on June 28, 2006 at 1.25 pm, the customer purchased a wood carving in O'Malley's Art Shop in Meath for €250.00. The rate of VAT for the woodcarving was 13.5% and therefore the price excluding VAT was €220.26 and the VAT paid was €29.74. Again VAT was charged on this purchase. Additional fields such as a total VAT field 47, a VAT refunded to date field 49 and a VAT charged to date field 51 may be provided. In addition to these, fields for completion by the customer subsequently or for automatic completion using information previously submitted by the customer, or for insertion into the fields prior to or after printing are provided including a customer name field 53, a customer address field 55, a customer credit card details field 57, a passport number field 59, a nationality field 61 and a flight details field 63 including arrival date and time, flight number, departure date and time and departure flight number are provided.

Once this form 29 is completed, it may be provided to the customs officer or other authorised official who may stamp the form, or approve it in a particular manner prior to the form being sent by either the customer, the customs officer or authorised official to the transaction server operator who then effects a refund if necessary. In the embodiment shown several of the transactions were conducted without a portion of the VAT being charged. This may have been possible by the transaction being carried out in a particular manner and the customer was simply not charged for the VAT at the point of purchase. Therefore only the remaining VAT is due, in this case €143.34. If all the items are approved by the customs official or authorised official, the transaction server operator marks the purchase details in transaction server memory as cleared and issues a refund of €143.34 to the customer by cheque, credit transfer or preferably by issuing a refund to their credit card directly. Other ways of refunding the customer such as by providing mobile phone credit or store credit may be provided as well. It will be understood that in the circumstance where it is essential to provide credit card details in order to receive a unique identifier, it is not necessary for any of the purchases to have been charged with VAT once the customer could provide a unique identifier to the retailer as there is a recharging mechanism in place if the customer fails to obtain clearance. However, for cashflow purposes or other company policy it may be preferably for certain retailers to charge the VAT and have it refunded at a later date. In this example, value added tax (VAT) has been used as

an example only of the duty that is typically charged and it will be understood that the invention is not limited solely to VAT applications but may be used with other forms of taxation and duty other than VAT.

Referring to Figure 3 of the drawings, there is shown a diagrammatic representation of an alternative configuration of record of all purchase details used in accordance with the present invention, indicated generally by the reference numeral 71. The record 71 has a customers details section 73 with a plurality of fields for entry of information relating to the customer including a first name field, a surname field, an address field, a street field, a city field, a state field, a country field, an arrival date field, a departure date field, a flight number field and a passport number field. There are further provided a plurality of fields relating to purchases made by the customer including a store/item field, a date field, a refund type field, a quantity field, a VAT rate field, a price (incl VAT field), a VAT amount field and an amount paid field. A number of purchase details 75(a), 75(b), 75(c), 75(d) and 75(e) of various purchases made by the customer are shown and a total field 77 is further provided with a summary of all the purchases. A total VAT field 79, a VAT refund advanced field 81 and a VAT refund deferred field 83 are provided. There is further provided a section 85 for a customer's signature and a section for a customs verification stamp 87.

The majority of the items on the record of all purchases, 71, will be self explanatory, however, it can be seen that the purchase details 75(a), 75(b), 75(c), 75(d) and 75(e) of various purchases made by the customer are separated under two separate sub headings, Moneyback (Registered Trade Mark (RTM)) and Touristfree (RTM), used to denote two separate providers of Tax Refund operators that both use the current method but whose details may be provided on a single form. The completed record may be sent to both of these parties in due course for reconciliation of their records. Furthermore, it can be seen that the transactions carried out on the 11/11/06 in Blarney Woolen Mills were deferred refund transactions whereby the refund is made subsequently and not at the point of sale and the transactions made on the 12/11/06 in both Mack knitwear (Registered Trade Mark (RTM)) and Aran Sweaters (RTM) were advanced transactions whereby the partial refund of duty, in this case VAT, was issued at the point of sale. This may be due to the fact that the customer may have a unique identifier in their possession but may not have registered their credit card

details with that unique identifier before making the purchases on 11/11/06 and therefore it was not possible to provide a partial refund at the point of sale. They may then have had the opportunity to register their credit card details prior to or during the first purchases made on the 12/11/06. The registration process will be described in greater depth below.

The partial refund issued to the customer during an advanced transaction represents the duty to be refunded minus a processing fee recouped by the Tax Refund operator. It can be seen that in the transaction carried out on 12/11/06 in Mack knitwear, where the customer purchased a polo shirt for €27.00, the total purchase price inclusive of VAT for that good is normally €30.25 with VAT at 21% amounting to €5.25. The total price excluding VAT is therefore €25.00. However, the customer is charged a €2.00 processing fee (€27.00 in total for the goods excluding VAT but including the processing fee) by the Tax Refund operator which is taken from the VAT amount. Therefore, the customer receives a refund of €3.25 on the transaction and they will not be recharged the VAT amount owed as long as they comply with all the necessary requirements in order to have the refunds authorised. Similarly, the transaction in Aran Sweaters for knitwear costing €159.45 represented a cost of €150.00 ex VAT purchase price plus a €9.45 processing fee for the Tax Refund operator. The customer therefore received an advanced VAT refund at the point of sale of €22.05.

Finally, it can also be seen that for all the transactions, the total VAT amounts to €74.20. Of this, €25.30 was advanced to the customer in advanced refunds (€3.25 + €22.05) and €26.21 is deferred partial refunds from the transactions made on 11/11/06. Of course, it will be understood that the deferred partial refunds of €26.21 in fact represent the total amount of VAT paid on these transactions, €37.45 minus the commission taken by the Tax Refund operator, €11.24. Furthermore, the Total VAT amount, €74.20 minus the sum of the advanced refunds and the deferred refunds (€25.30 and €26.21 respectively) €51.51, equals the commission or processing fee charged for all the transactions, whether deferred or advanced, by the Tax Refund operators, in this case €22.69. Once the customer has completed all of their purchases, the record of purchases 71 may be printed and then completed or completed electronically and provided to the customs officers or other authorised

individual who will provide a suitable stamp, seal, signature or other marking in section 87 prior to the completed form being submitted to the transaction server operator who will issue the refund if appropriate.

As mentioned above, an individual may have access to a unique identifier without having been registered with the system. In this way, details relating to one or more purchases made by the individual may be stored with the unique identifier without the system having knowledge relating to the owner of that unique identifier or without knowledge of certain information concerning that owner. For example, the unique identifier may simply be provided to individuals as they disembark an aircraft from a particular jurisdiction. These unique identifiers could be in the form of an alphanumeric code or the like printed on the back of a credit card sized carrier or in a format similar to that described elsewhere in this specification. These unique identifiers will not in effect be assigned to a specific individual at that stage although the unique identifier will only be used by that individual but rather they will have to be assigned to that specific individual at a later stage when the individual registers with the transaction server. In order to allow the customer receive refunds of duty, they must register their details such as credit card details with the transaction server operator.

The individual may register their details in a number of different ways. First of all, the individual may register prior to their journey in what is referred to as a pre-visit registration. They may register over the internet, by post, using a tele-operator or other such method whereby they submit their details in advance to a transaction server operator and they can be provided with their unique identifier. In certain circumstances, the unique identifier if stored in a memory storage device may be transmitted to them by post with or without other travel documents or left for collection. The next way in which the customers could register is during their visit. Typically, the customers may be provided with a unique identifier, either in store or in the airport on their arrival and they can register with the transaction server operator once they have the unique identifier. They may register their details in a similar manner to that described above in that they may register over the telephone, over the internet or by using a dedicated terminal or kiosk provided for the service.

Furthermore, they may register during the first or subsequent purchase in store by providing details to the transaction server using the point of sale terminal which may operate in a similar manner to the credit card magnetic swipe or chip and pin cards. If a credit card is used in the purchase of goods then the credit card details used in that purchase may be sent to the transaction server along with the unique identifier and the purchase details. These credit card details are stored in transaction server memory and from the credit card the customers name and credit card information may be obtained. The customer may be prompted to insert other information into the credit card reader or suitable device on an alphanumeric keypad such as their first name, surname, date of birth and the like. The registration does not necessarily have to take place on the first purchase and the customer may use other methods of payment and register later or may use the credit card and still decide to register later if additional information is required and the place in which they are making a purchase is busy. As well as registering in store, the individual may register subsequently at an airport desk or the like prior to their departure in the airport. Alternatively a dedicated kiosk may be provided to allow them to register prior to departure or alternatively they may register in person at a dedicated desk supplied by the transaction server operator by filling out an appropriate form. Finally, if the individual should not be in a position to register with the transaction server operator prior to their departure, he may do so post departure by using a number of disparate technologies such as those described above including the internet, telephony or a post based system if desired. The mode in which the individual registers is not particularly important, what is important is the fact that they can register at various times.

Referring now to Figure 4(a) to 4(c) inclusive of the drawings, there is shown a flow diagram of the method of processing transactions according to the invention. Figure 4(a) shows the various ways in which an individual may be provided with a unique identifier and also how they may register with the transaction server. In step 91, a visitor is provided with a unique identifier prior to their departure and registers with the transaction server. In step 93, that individual provides the vendor with the unique identifier when they are purchasing the goods and the method proceeds to step 95 where the method is carried out. Alternatively, in step 97, a visitor is provided with their unique identifier prior to departure or on arrival but chooses not

to register with the transaction server at that time. In step 99, the visitor presents their unique identifier to the vendor when they wish to purchase goods. The transaction server (not shown) recognizes that the visitors details for that unique identifier are not yet registered with the transaction server in step 100 and the method proceeds to step 101 at which point the individual may provide complete, partial or no registration details to the transaction server by entering information on the POS system (not shown) and the method then proceeds to step 95 where a transaction is carried out. Depending on the information that has been provided an advanced refund or a deferred refund may be given for the purchase. As described previously, if the individual provides sufficient details including their credit card details, it will be possible to provide them with an advanced refund. Otherwise, a deferred refund will be provided. In another alternative, in step 103, an individual that is not registered and that does not have a unique identifier prior to departure wishes to make a purchase, they proceed to step 105 in which they wish to make a purchase but do no have a unique identifier to associate with that purchase. In step 107, the individual is issued with a unique identifier in store by the vendor. As described previously, the vendor may be pre-supplied with a number of unique identifiers by the transaction server, one of which may be given to the customer. Alternatively, the unique identifier could be obtained in real time from the transaction server using the POS system. Again, the method proceeds to step 101 where the customer may provide complete, partial or no registration details to the transaction server by entering information on the POS system before proceeding to step 95 where a transaction is carried out. Once again, the information provided in step 101 will determine to a certain extent whether an advanced or a deferred refund will be issued.

When operating the method in step 95, there are essentially two options provided by the method. First of all, the method may proceed to step 109 in which purchase details of each of the purchases made by the customer are transmitted to the transaction server when those purchases are made. In this way, all of the purchase details are stored on the transaction server memory along with the customer unique identifier. Alternatively, or in addition to this, the method may also proceed to step 111 where purchase details may be stored on a smart device held by the customer such as a PDA, smartcard, mobile phone or other similar device,

preferably the same device that holds the unique identifier of the individual. The data stored on the smart device will preferably be compressed and encrypted prior to being stored on the smart device. In step 113, the purchase details of that individual are accumulated with the other purchase details of that individual stored in memory and associated with the unique identifier. If they have not already done so, or if they have only provided incomplete information in the past, the individual may provide registration details in step 115 during their visit using any of the method previously described such as by using a POS system, a device having access to the transaction server over the internet, or similar method.

Once they have completed all of their purchases, the individual may then proceed to having their purchases approved for duty refund by an authorised party. This may be carried out in a number of ways, either prior to departure or after their departure. In step 117, the visitor surrenders their unique identifier via a dedicated device in an airport such as a kiosk and completes a purchase record with all the purchase details, either electronically or by printing the form and then manually filling out the appropriate details. Alternatively, the visitor surrenders their unique identifier along with completed details electronically to customs in step 119. Once the unique identifier and purchase record has been submitted to the authorised official, in this case customs, the approved finalised data is sent in paper or electronic form to the transaction server for processing in step 121. Alternatively, the purchase details stored on the smart device, once they have been approved, are transmitted to the transaction server and removed from the smart device in step 122. The method then proceeds to step 123 in which the method ends by the transaction server reconciling the approved purchase record with the purchase details stored in memory and issuing a refund if appropriate to the individual.

Alternatively, the individual may continue their journey or return home without surrendering their unique identifier to the authorised official in the airport in step 125. There are two possible options for the individual, in step 127, they may consciously or inadvertently fail to complete the approval of the purchase record process in which case any duty which had been refunded to them will be recharged to their credit card and if appropriate a charge for the unique identifier carrier may be applied to them. In this case, the finalised data i.e. data that has not been

reconciled will be transmitted to the transaction server in step 129 and the method concludes in step 123, this time without the transaction server reconciling an approved purchase record with the purchase details stored in memory. The second option available to the individual after they have returned home or continued their journey in step 125 is to retrieve a purchase record containing all of their purchase details in step 131 and complete that form before having the form notarised by an authorised individual and sent to the transaction server for reconciliation. The form may be transmitted to the transaction server by post or other means and it is envisaged that the individual may access the purchase record via the internet or it may be transmitted to them electronically on request. In step 133, the form is processed by the transaction server and a refund of duty is issued if appropriate in the manner described above. Once this has been achieved, the finalised data is stored by the transaction server in step 129. If in step 135, the individual realises that they have inadvertently forgotten to complete their record of purchases, they may do so and retrieve the form in step 131 in which case the method will proceed in the normal fashion in which the refunds of duty will be effected once the completed purchase record has been provided.

It will be understood that in certain embodiments all of the duty transactions may have been deducted at source and therefore no refund will be necessary, but simply it is necessary for the transaction server to reconcile their purchase details with the cleared purchase record and mark each of the purchase details as having been authorised. If, after a predetermined time, a record has not been cleared yet the duty refund that was deducted at source is still due, the transaction server may detect this and charge the credit card details of the customer. Throughout this specification, many of the examples have shown a refund of duty being paid to the customer. In most circumstances, the refund of duty to the customer will in fact only be a percentage of the duty paid and the remaining portion going to the company that reconciles the duty repayments. For simplicity however, it has been shown that the customer getting a duty refund provided that they adhere to the given requirements but in practice the customer will only be given a percentage of the refund amount.

Similarly, if the customer is provided with a magnetic swipe card or chip and pin card with a unique identifier that is to be returned prior to or post their departure, but does

not return the card within a predetermined period of time, the transaction server operator may charge the customer for the value of the card with a nominal sum. Any returned cards may be cleared and reissued to other customers in the future.

It is envisaged that in certain embodiments, the customer may pre-register with the transaction server but will not receive a card from the transaction server with their unique PIN associated therewith. This may be the case if there is insufficient time between registration and the user making their journey or if the user has already started their journey. In this instance, it is envisaged that they may receive a card after arrival, either at the point of entry or preferably at the location of their first purchase and if they use their credit card to make that purchase, their pre-stored unique identifier and their credit card details pre-stored in transaction server memory may be associated with the card that they received at that stage and the card will essentially be loaded with all of the required information from the POS terminal.

It is envisaged that instead of providing a physical card to the customer with the unique identifier, the transaction server operator may alternatively provide an alphanumeric code to each customer for use as the unique identifier. For example, a customer may be provided with an eighteen digit (or other) code that they may provide to the retailer. The code could be transmitted to the customer via the POS system from the transaction server operator on the making of an initial purchase. It could be printed on the receipt of the initial purchase or could be sent to the customers mobile phone, PDA, or other memory storage device capable of receiving messages with information. The customer could then provide the unique identifier to the retailers when making a purchase by inserting the unique identifier code in a keypad or the like on the POS system. Throughout this specification the term POS system and POS terminal have been used and are to be interpreted in a broad manner and it is not intended to be limiting to a very specific type of device or apparatus but rather is intended to encompass the many different variations of POS systems available.

There are two further types of transactions that should also be mentioned that may be handled using the present invention, namely refunds and voids. In the case

where a customer wishes to return item(s) that have already been purchased, a refund of the purchased item is undertaken. This applies to transactions that have already been completed and which have received either an advanced or deferred refund of a portion of the duty. The return details of the item being returned are transmitted by the point of sale system to the transaction server along with the customer's unique identifier. The transaction server determines whether in making the original purchase, the customer received an advanced or deferred refund. In the case of an advanced refund the transaction server amends the purchase record matched to this unique identifier and the customer receives a purchase refund via a payment method of his/her choice, minus the portion of duty advanced at the initial purchase.

When the transaction server determines that a deferred refund took place, it modifies the purchase record matched to the customer's unique identifier to reflect the returned item. The customer receives a refund at the point of sale for the full value excluding the appropriate administration charge.

A voided or cancelled transaction occurs when the customer returns all items they have previously purchased – this is distinct from the terminology used in electronic point of sale (ePos) systems where a void is identified as the cancellation during purchase of an item(s). In this usage a void/cancellation refers to transactions that have already been completed and which have received either an advanced or deferred refund of a portion of the duty. In this case the customer wished to return all items previously purchased and the customer wishes to cancel or void the entire transaction. The return details of the item being returned are transmitted by the point of sale system to the transaction server along with the customer's unique identifier. The transaction server determines whether in making the original purchase, the customer received an advanced or deferred refund. In the case of an advanced refund the transaction server amends the purchase record matched to this unique identifier and the customer receives a purchase refund via a payment method of his/her choice, minus the portion of duty less the appropriate administration charge. When the transaction server determines that a deferred

refund took place, it modifies the purchase record matched to the customer's unique identifier to reflect the returned item. The customer receives a refund at the point of sale for the full value of the initial purchase including duly charged.

Throughout this specification, the phrase transaction server operator has been used to denote the entity such as a company, individual or organisation that controls the transaction server. When mention is made of the transaction server operator, and in particular transmitting information to or receiving information from the transaction server operator or of acts being carried out by the transaction server operator, it is understood that these communications or these actions may be being carried out automatically by the transaction server without additional human intervention or interaction. For example, in many cases an approved purchase record will be sent directly to the transaction server of the transaction server operator which will then determine whether a refund is to be issued or a recharge avoided and will instigate any such refund without any human interaction. In other implementations, human interaction may be required.

In the specification, reference is also made to communications to and from the transaction server and the POS system, it will be understood that these communications may be routed through an intermediate local data store associated with one or more POS terminals. The communications may be made periodically or at certain specified times from the local data store to provide more robust communications with the transaction server and lower contention rates on the communication channels with the transaction server during the most busy periods of the day or night.

In the diagrams, the point of sale system has been shown diagrammatically with a dedicated, separate terminal. However, the POS system and in particular a credit card reader or the like could be an integrated POS system with the credit card reader directly incorporated into the POS system. Furthermore, the POS system could incorporate not only a memory device reader but also a memory device writer whereby information may be written to the memory device. This is seen as particularly advantageous particularly in the case when the unique identifier is stored

in a memory device such as an MP3, memory stick or mobile phone with memory. The information concerning the transaction may also be stored on the memory device so that this information on the memory device may be used to provide a purchase record to the authorised official without the customer having to access the remote transaction server. In this specification, reference is made to a plurality of retailers. It will be understood that these may be part of a single legal entity or several disparate legal entities.

It is envisaged that the present invention covers wireless devices and protocols, contactless devices and the like, for communicating the unique identifier, storage of transactions and such functionality. Furthermore, developments in card technology include biometric data and recognition are also included with the scope of this invention. It is envisaged that these types of card could hold information of the card holders address, nationality and other relevant data. Furthermore, it is envisaged that credit cards could provide the means of being a unique identifier.

The invention could be used as a background provider and processor to credit card, charge card (Amex (RTM), Diners (RTM)) and other payment providers and not act as a direct process at ePOS. This would mean at each use of the persons Visa (RTM) card or the like along with an authorization request for payment, the scheme would detect whether goods were purchased which qualified for duty rebate i.e. the credit card schemes (and others) would be able to offer automatic duty refund detection to their card users. This can be achieved using a standard card nationality detection used in the coding of the credit card number and this would then be compared to the retailers location to determine whether the card holder qualified for Vat/Duty discounting based on nationality.

Furthermore, the system caters for a number of commissions and refunds. The refund model applies to the proportion of VAT/Duty which is refunded to the visitor/tourist and the balance of the amount versus the Vat/Duty content that is retained as a fee for the management and processing of that refund. Commission exists at a variety of levels, commission can be paid by the scheme operator to the retailers for using the operators scheme. Similarly commission may also be paid by the scheme operator to its sales force and also to other agents such as tour

guides, coach drivers and the like. A flexible model is provided to cater for both refunds and commissions as in each case its transaction (purchase by a visitor/tourist) must have the VAT/Duty content of their purchase divided between the visitor/tourist as a refund and the remaining funds divided between the scheme operator, retailers, sales persons and agents as commission.

It is envisaged that the system will incorporate six separate schemes which can be used to calculate both tourist/visitor refunds and also retailer commission, sales person and agent commissions. The model can easily have other additional schemes added if required. The six basic schemes are a Flat Rate percentage scheme, a Scale Value table which is calculated on a purchase amount basis, a Scale Value table which is calculated as a percentage of the total purchase amount based on the purchase amount basis, a Scale Quantity table whereby the rebate specified as an amount of goods purchased, a Scale Quantity table whereby the rebate is specified as a percentage of the total purchase amount based on the number of items purchased and a Scale Administration Charge table whereby the rebate is specified as an amount based on the total expenditure. Other remuneration schemes could also be provided and what must be understood is that the system is flexible and allows for simple modification to suit then individual retailers needs.

One final aspect of the present invention is that it also includes a comprehensive reporting model for its various users, such as scheme operators, retailers, departmental reports and user designed reports. For scheme operators, it is possible to generate statutory reports for reporting of VAT/Duty to the various national revenue authorities plus a suite of reports covering performance, retailers, sales and the like. For retailers, it is possible to provide a suite of reports providing the retailer with fiscal and performance information. For the departmental reports, it is possible to provide reporting to an accounts department, sales and marketing departments at both scheme operator and retailer levels. Finally, user designed reports will provide a mechanism for users to design their own reporting requirements. There is also envisaged an Executive Analysis Model which may be provided with a suite of data analysis tools permitting scheme operators, retailers and others to do statistical analysis of their data in a free form approach i.e. a "what

do you want to know" where the user defines his/her areas of interest. For example, a retailer may wish to look at the breakdown of visitors/tourists to the retailers premises. He may at first examine the visitors by nationality and volume and then decide to re-sort this data by spend i.e. which nationality is spending the most in the store. The user can further drill down to extract visitors by department, visitor by nationality per department and the like. Additional features may also be implemented such as a Brochure Website, an EFT model, a Back Office Management Model and a LiveUpDate model. The brochure website provides information for retailers, scheme operators and tourists alike. The EFT Model provides settlements to retailers, sales persons, agents, visitors/tourists and the like. The Back Office Management Model provides a suite of applications allowing for day to day management e.g. adding new retailers to the system, issuing unique id's, creating retailer specific refund tables and the like. Finally, the LiveUpDate feature will provide for Retail ePos systems that need to be 'always on' i.e. allow for failures at multiple levels and still be operational. The system incorporates a subsystem which will ensure data storage of transactions in the event of a failure at local level within a retailers ePos network, a failure within a retailers wide area network, a failure of communications systems (telephone, broadband or the like), the data can then be communicated once the failure has been repaired. This subsystem will also ensure local copies are maintained of tourist refund tables and other data critical to the upkeep of the ePos system in the event of one or more failures.

In the specification the terms "comprise, comprises, comprised and comprising" or any variation thereof and the terms "include, includes, included and including" are deemed to be totally interchangeable and they should all be afforded the widest possible interpretation.

The invention is not limited to the embodiments hereinbefore described but may be varied in both construction and detail within the scope of the claims.

CLAIMS

1) A method of processing transactions that qualify for a refund of duty, where a plurality of retailers (3) sell goods to customers, in a system (1) comprising

a plurality of retailer point of sale -POS- systems (5),

a transaction server (7) having memory (9) for the storage of purchase details sent by the POS systems on a customer making a purchase, and

a remote device (15, 11) operable by a customer,

wherein the transaction server is accessible by the POS systems and includes a customer interface providing customer access from the remote device and means to register customer details for a customer, the customer being provided with a unique identifier,

the method comprising the steps of:

a retailer POS receiving purchase details of a good purchased by a customer;

the retailer POS system transmitting both the unique identifier and the purchase details to the transaction server;

the transaction server storing the purchase details with the unique identifier in transaction server memory; and

the remote device responding to a customer

to use the unique identifier to access via the customer interface of the transaction server the purchase details of each of the purchases associated with the unique identifier stored in the transaction server memory and to download a record of the purchases associated with the unique identifier and

to complete the record of the purchases associated with the customer's unique identifier for presenting a completed purchase record of those purchases for clearance of the completed purchase record by customs.

2) The method of claim 1 comprising an initial step of the customer registering with the transaction server by providing the transaction server with customer details and the transaction server associating the customer details with the customer's unique identifier.

3) The method of claim 2 in which the customer registers with the transaction server during an initial purchase of a good.

4) The method of claim 2 in which the customer registers with the transaction server prior to making an initial purchase of a good.

5) The method of any of claims 2 to 4 in which the customer details provided to the transaction server comprise the customer's credit card details.

6) The method of claim 5 in which the customer's credit card details are stored in the transaction server memory.

7) The method of claim 5 or claim 6 in which the step of issuing a refund to the customer further comprises crediting the refund to the credit card of the customer.

8) The method of any of claims 1 to 7 in which the method further comprises the step of printing the record of all purchase details containing the customer's unique identifier on a printer connected to the remote device.

9) The method of claim 8 in which the record of all purchase details containing the customer's unique identifier is printed on a single form.

10) The method of claim 8 or claim 9 comprising the remote device responding to the customer to insert information relating to that customer in the record of all purchases containing the customer's unique identifier in order to complete the purchase record.

11) The method of any preceding claim in which the customer's unique identifier is stored in a memory storage device.

12) The method of claim 11 in which the memory storage device is a magnetic swipe card.

13) The method of claim 11 in which the memory storage device is a chip and pin card.

14) The method of any of claims 11 to 13 comprising introducing the memory storage device to a memory storage device reader in the POS system to provide the customer's unique identifier to the retailer.

15) The method of any preceding claim comprising periodically determining purchase details stored in the transaction server memory that have not been reconciled with a cleared completed purchase record within a predetermined time limit and determining whether any duty is to be charged to the customers and thereafter charging any duty owed.

16) The method of claim 15 in which for those purchase details not reconciled within a predetermined period of time, the transaction server recharges a credit card of the customer with the value of duty refunded to date.

17) The method of any preceding claim in which the retailer provides the customer with an advanced refund of a portion of duty on-site on receipt of a unique identifier by a customer regardless of the mode of payment.

18) The method of any of claims 2 to 4 in which the customer details provided to the transaction server comprise the customer's billing address details.

19) The method of any preceding claim in which the unique identifier is the credit card number of the customer and the method comprises the step of the customer providing the transaction server with their credit card number and the transaction server thereafter allocating that credit card number as the unique identifier to the customer.

20) The method of any preceding claim in which on a customer returning a good previously purchased by them to the retailer, the method comprises the intermediate steps of:

the retailer receiving the good and the customer's unique identifier from the customer;

the retailer POS transmitting details relating to the returned good along with the unique identifier from the POS system to the transaction server;
the transaction server amending the purchase details relating to that good stored in memory.

21) The method of claim 20 in which the customer wishes to return all goods purchased by them during a transaction and void the transaction, the method comprises the steps of:
the retailer receiving the goods and the customer's unique identifier from the customer;
the retailer POS transmitting details relating to each of the returned goods along with the unique identifier from the POS system to the transaction server; and
the transaction server amending the purchase details relating to each of the returned goods stored in memory.

22) The method of claim 20 or claim 21 in which subsequent to receiving details relating to the returned good and the unique identifier from the POS, the transaction server performs the intermediate step of determining whether the customer received an advanced refund of duty or a deferred refund of duty.

23) The method of claim 22 in which on determining that the customer received an advanced refund of duty, the transaction server transmits a message to the POS that the customer is not entitled to a refund of the duty.

24) The method of claim 22 in which, on determining that the customer received a deferred refund of duty, the transaction server transmits a message to the POS that the customer is entitled to a refund of at least part of the duty.

25) A system (1) for processing transactions that qualify for a refund of duty in which a plurality of retailers (3) sell goods to customers, the system comprising
a plurality of retailer point of sale -POS- systems (5),
a transaction server (7) having memory (9) for the storage of purchase details sent by the POS systems on a customer making a purchase, and,
a remote device (15, 11) operable by a customer,

wherein:

the transaction server is accessible by the POS systems and the remote device and has means to register customer details for a customer, each customer being provided with a unique identifier;

each of the POS systems (5) has means to receive the unique identifier for the customer on the customer making a purchase and means to send that unique identifier to the transaction server along with the purchase details;

the transaction server further has means to store the customer unique identifier in transaction server memory together with the purchase details; and

the transaction server further comprises a customer interface whereby a customer may subsequently access, from the remote device through the customer interface, the purchase details of each of the purchases associated with the customer's unique identifier stored in the transaction server memory and download a record of the purchases associated with the customer's unique identifier for completing the record of the purchases associated with the customer's unique identifier and for presenting a completed purchase record of those purchases for clearance of the completed purchase record by customs.

26) The system of claim 25 in which the remote device is a personal computing device (11).

27) The system of claim 25 in which the remote device is a dedicated kiosk (15).

28) The system of any of claims 25 to 27 in which the remote device is provided with a printer for printing a record of all purchase details associated with a customer's unique identifier stored in transaction server memory.

29) The system of any of claims 25 to 28 in which the unique identifier is stored on a memory storage device.

30) The system of claim 29 in which the memory storage device is a magnetic swipe card.

31) The system of claim 29 in which the memory storage device is a chip and pin card.

32) The system of any of claims 25 to 31 in which the POS system comprises a memory storage device reader.

33) The system of any of claims 25 to 32 in which the transaction server further comprises means to record the credit card details of each customer and to associate those credit card details with the unique identifier for that customer.

34) The system of any of claims 25 to 33 in which the unique identifier is the credit card number of the customer.

35) The system of any of claims 25 to 34 in which functionality is embedded on the credit card of the customer.

36) The system of any of claims 25 to 35 in which the system further comprises a reconciliation module that has means to periodically review each of the purchase details stored in transaction server memory that have not been reconciled with a cleared completed purchase record after a predetermined period of time and for those purchase details that have not been reconciled, charge the customer with any unpaid duty if appropriate.

37) The system of any of claims 25 to 36 in which the transaction server is connected to the POS systems and the remote device via a network (25).