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(54) **A SYSTEM OFFERING SIGNIFICANT CONVENIENCES IN TERMS OF DIGITALIZATION, TIME SAVING AND SECURITY**

(57) This invention relates to a system (1) that presents significant conveniences in terms of digitalization, time saving and security in the triad of tourists, governments, and retailers. Thanks to the system (1), tourists can easily get their VAT refund payments back, while

retailers gain time and labor in a completely digital structure. On the government side, more regular records and more irreversible steps are presented by increasing traceability.

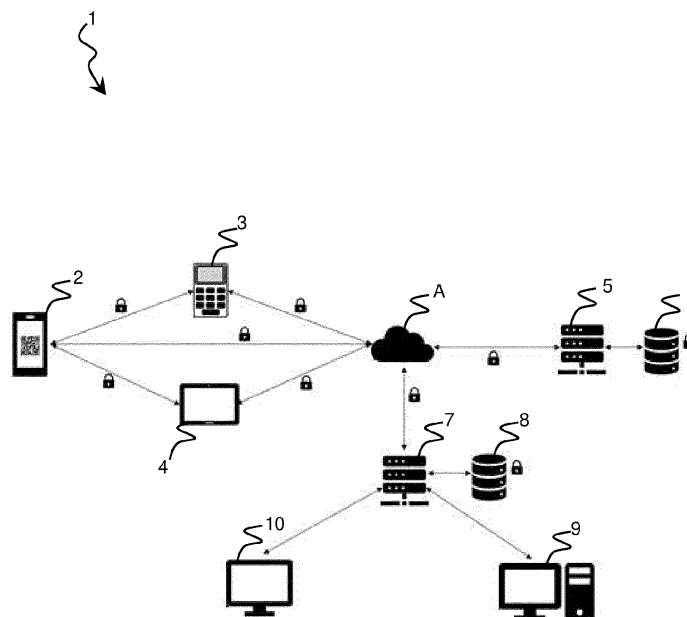


Figure 1

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Description

Technical Field

[0001] This invention relates to a system that offers significant conveniences in terms of digitalization, time saving and security in the tourist, government, and retailer triad.

Present State of the Art

[0002] Tourists visiting countries generally have the right to receive VAT refunds when they leave the country with their purchases in the country. In order for the tourist to get a VAT refund, it must meet the necessary conditions for example it shouldn't been more than 3 months since the shopping, the products should not be used in their original boxes and etc. In order for the refund to take place, the retailer must be working with an intermediary firm (TaxFree Refunder) that refunds VAT or must be able to refund it himself. But in both cases, it is mandatory to have documents stamped from customs.

[0003] When the tourist arrives at the payment point at the retailer, he/she informs the retailer that he/she wants to make a VAT refunded transaction (TaxFree). In addition to the standard procedures, the tourist has to manually fill out a paper form. When he arrives at the departure point from the country, he submits these forms to the customs officer and if the products comply with the refund conditions, the documents are stamped by the customs. VAT refund is provided by using the stamped documents by the intermediary/refund company. The intermediary firm forwards the stamped documents to the retailer and demands VAT refund.

[0004] In the present solution, the following problems are encountered;

- ❖ VAT refund transactions are manual (filling the form, the tourist needs to go to the customs inspection officer and physically contact the intermediary company to get the stamp and refund it, etc.),
- ❖ The tools used are left behind from today's technological developments (not using smartphones and applications, not using digital stamps, not using digital methods in identity confirmation, not using data matrix, not using wireless connection facilities, etc.),
- ❖ Customs still works with physical stamps and does not have a solution for digital stamps,
- ❖ Physical processing, storage/archiving of documents at all stages and
- ❖ Inability of the government to obtain/store any data about the products exported after the process is completed

[0005] In the patent application document TR2012/03286, which is in the present state of the art, the systems, and methods for paying the tax refund amounts that people residing abroad (tourists) are entitled to receive as a result of their purchases exceeding a certain fee quota in any country other than their country of residence are described. In the relevant application document, a structure that offers important conveniences in terms of digitalization, time saving and security in the tourist, government and retailer triad is not mentioned.

[0006] As a result, due to the inadequacy of the solutions to meet the above-mentioned needs, it was necessary to make a development in the relevant technical field.

The Object of the Invention

[0007] The invention is inspired by present situations and aims to solve the above-mentioned disadvantages.

[0008] The object of this invention is to reveal a system that offers important conveniences in terms of digitalization, time saving and security in the tourist, government, and retailer triad.

[0009] Tourists and retailers register to the service offered by the system through digital methods (mobile application, website) with an identity approved. After the tourist registers, he/she gets a special QR code containing his/her information. Retailers can install applications on tablet/laptop devices or use the POS machines of the service provided by the system in order to use the system.

[0010] The tourist reads the QR codes by using the tablet/laptop or POS machines of the service at the payment points of the retailers registered to the service via the application installed on their smartphone. Retailer information, tourist information in the QR code and electronic invoice are sent to the service and matched. The paired information is transmitted to the customs data center and uploaded to the tourist's account logged into the service.

[0011] When the tourist arrives at the departure point (airport, border gates, etc.) from the country, he can use the mobile application, or the terminals connected to the service to remove the products that are contrary to the refund rules determined by the state from the products to be used for refund. As a result of the evaluations made according to the risk profiles determined by the customs, he is informed whether the tourist needs to be checked by the inspection officer. When the tourist receives a notification that he needs to appear to the Customs inspection officer, he must go to the officer checkpoint and have his products checked by the officer. After the control, the officer makes a positive or negative decision. When a positive decision is made, the officer digitally stamps the documents through the terminal belonging to the customs service. When the tourist does not receive a notification that he needs to go to the checkpoint, the tourist's documents are automatically and digitally stamped. The stamped documents are transmitted from the customs

to the service offered by the system. Digitally stamped documents are transmitted by the system to the tourist and the retailer, and VAT refund is requested from the retailer. After the refund amount is sent to the system, the amount to be refunded to the tourist is sent to him as soon as possible.

[0012] All documents shared in this process are stored in the customs data center and can be used for various analyses.

[0013] The structural and characteristic features of the invention and all its advantages will be understood more clearly thanks to the figure given below and the detailed description written with reference to this figure and therefore the evaluation should be made taking into account this figure and detailed description.

Figure to Help Understand the Invention

[0014]

Figure 1 is the schematic representation of the system of the invention.

Description of the Part References

[0015]

1. System
2. Smart phone
3. POS machine
4. Tablet/laptop
5. Server
6. Database
7. Customs server
8. Customs database
9. Inspection terminal
10. Departure terminal
- A. Internet

Detailed Description of the Invention

[0016] In this detailed description, preferred embodiments of the system (1), which is the subject of the invention, are described only for a better understanding of the subject.

[0017] This invention relates to a system (1) that presents significant conveniences in terms of digitalization, time saving and security in the triad of tourists, gov-

ernments, and retailers. Thanks to the system (1), tourists can easily get their VAT refund payments back, while retailers gain time and labor in a completely digital structure. On the government side, more regular records and more irreversible steps are presented by increasing traceability.

[0018] The system (1), which is the subject of the invention, whose schematic representation is presented in Figure 1, comprises;

❖ a smartphone (2), which provides the tourist to digitally register with the system (1) and has a special QR code containing his/her information after registration, which provides the tourist to connect with the system (1) and the retailer, and which stores various private information,

❖ a POS machine (3), which reads the QR code on the tourist's smartphone (2) at the point of sale and shares the shopping information with the system (1),

❖ a tablet/laptop (4), which provides the retailer to digitally register with the system (1) and access the system (1), read the QR code on the tourist's smartphone (2) and share shopping information with the system (1),

❖ a server (5), which processes and matches retailer information, tourist information in the QR code and electronic invoice information sent over the internet (A) from smartphone (2), POS machine (3) and tablet/laptop (4) and which transmits the paired information to the smartphone (2) and uploads this information to the account made by the tourist,

❖ a database (6), which provides that the information on the server (5) is stored in an encrypted manner,

❖ a customs server (7), which communicates with a smartphone (2), POS machine (3), tablet/laptop (4) and server (5) over the internet (A), receives the matching information processed by the server (5), makes evaluations according to the determined risk profiles and as a result of these evaluations, decides whether the tourist needs to be checked by the inspection officer, if the tourist decides to pass the inspection of the inspection officer, transmits this decision to the tourist's smartphone (2) if the tourist decides to pass the inspection by the inspection officer, and automatically stamps the tourist's documents if it decides that the tourist does not need to be checked by the inspection officer,

❖ a customs database (8), which provides that the information contained in the customs server (7) is stored in an encrypted manner,

❖ an inspection terminal (9), which provides the of-

ficer to make approve, changes and similar transactions, when the tourist comes to the inspection officer's control, if the tourist receives a notification that he needs to appear to the customs inspection officer, the tourist's products are checked by the officer and the officer makes a positive or negative decision after the control and, if the officer decides positively, it provides digital stamping of tourist documents, and

❖ a departure terminal (10) which is the station where the tourist visits for departure procedures, which provides the digitally stamped documents to be sent to the smartphone (2) and tablet/laptop (4) at the automatic or inspection terminal (9) via the customs server (7) and to request VAT refund from the retailer.

[0019] The smartphone (2) is a tool with the functions of being used as an infrastructure with all its functions, displaying the data matrix as a result of registration with the application belonging to the system (1), initiating, arranging, and finishing all VAT refund transactions. In cases where the communication tools (POS machine (3), tablet/laptop (4)) at a registered retailer in the system (1) do not work or are not available, the photo of the invoice can be sent to the service belonging to the system (1) via the smartphone (2) camera and VAT refund procedures can be initiated. The relevant communication is provided over the internet (A).

[0020] By using the POS machine (3) or tablet/laptop (4), the QR code can be read, and the tourist retailer invoice information can be sent to the service over the internet (A).

[0021] The server (5) is the tool through which the sent information is processed and forwarded. The server (5), which is the center of all transactions, queues and manages the transactions that will take place. The server (5) stores the information sent by the users (retailer, tourist) who want to register, from the smartphone (2), the POS machine (3) and the tablet/laptop (4) via the internet (A). The server (5) creates a special QR code for the smartphone (2), POS machine (3) and tablet/laptop (4) and sends it to the users' applications. The server (5) matches the tourist, retailer and invoice information with the help of the QR code scanned during the payment at the end of the shopping and automatically fills out the TaxFree form. The server (5) processes the arrangements made in the list of the products that the tourist will take back and recalculates the amount to be refunded after the change. The server (5) manages the checkout operations at the departure points from the country. The server (5) sends the documents digitally stamped by the customs to the smartphone (2), the POS machine (3) and the tablet/laptop (4) via the internet (A) through the application. At the end of the transaction, the server (5) requests the refund amount from the POS machine (3) or the tablet/laptop (4) and sends the refund of the purchase to the smartphone (2). The server (5) writes all information and documents to the database (6) in encrypted form.

[0022] The information obtained by the server (5) can be shared with the customs server (7) and the information can be stored in the customs database (8) in an encrypted manner.

[0023] The customs server (7) is the tool for processing and routing customs information. The customs server (7) checks the accuracy and incompleteness of the documents sent by the server (5). The customs server (7) checks the sent documents according to the profile rules determined by the customs and the state, and as a result of the control, it decides whether the tourist will pass the inspection. The customs server (7) digitally stamps the documents when a positive result is obtained as a result of the controls, saves them in the customs database (8) and sends them to the server (5) for refund operations (4). The customs server (7) reads and reports various information from the customs database (8) during and after the process.

[0024] The departure terminal (10) is the station where the tourist can exit the country at the departure point. The departure terminal (10) allows the tourist to arrange the VAT refundable shopping list, apply for a digital stamp, and receive feedback that this application must be checked by the customs inspection officer or that his documents have been stamped automatically and digitally.

[0025] The inspection terminal (9) is the station connected to the customs server (7), which the officer will use for approval, change and similar control processes when the inspection officer comes to check. At the end of the controls, with the approval of the inspection officer, the documents are digitally stamped by the customs server (7).

[0026] The system (1) consists of 4 basic parts in general and the communication between the parts is provided by internet (A). The first of these parts is the application on the tourist's smartphone (2), the second is the infrastructure in the retailer (POS machine (3) or tablet/laptop (4)), the third is the server (5) and the database (6) connected to the server (5), the last part is customs server (7), customs database (8), departure terminal (10) and inspection terminal (9) connected to this customs server (7).

[0027] The transactions made through the POS machine (3), or tablet/laptop (4) continue with the digitization of the documents (E-Invoice, scanned documents, etc.) and sending them to the server (5) via the internet (A). In cases where the POS machine (3) or tablet/laptop (4) cannot be used, the transaction can also be started by sending the invoice photo via the application on the smartphone (2). Digitized information is transmitted to government and provider systems, and data can be shared completely digitally without any paperwork. When the tourist goes to the departure terminal (10), he performs his transactions, without using any paper documents which is performed manually, and the customs inspection officer also has the same advantage and can complete the transaction more quickly through the inspection terminal (9) without making any paper transac-

tions.

[0028] Information is transferred between the tourist's smartphone (2) and the retailer's infrastructure via the QR code or the wireless connection (Bluetooth, WiFi, NFC, etc.) to be provided, and the product and person information is recorded in the relevant elements (5,6,7,8). The suitability of tourists and products for VAT refund is also checked with digital infrastructure on the customs server (7), by the rules determined by the customs, and refunds are provided to the POS machine (3) or tablet/laptop (4) via the internet (A).

[0029] First the tourist must register in the system (1) via the mobile application on the smartphone (2). The tourist transmits the requested information (Passport photo, selfie, residence address, credit card or virtual wallet address, etc.) to the server (5) through the mobile application during the registration stage. This information is recorded in the database (6) and sent to the mobile application by the tourist-specific QR code server (5). When the tourist arrives at the payment point (POS machine (3) or tablet/laptop (4)) for the purchases that he/she wants to receive VAT refund after registration, he/she introduces himself/herself to the system (1) via the personal data matrix found in the mobile application. The E-Invoice created by the retailer is matched with the tourist by the server (5), thanks to this QR code. At the same time, the tourist can easily follow the shopping they have made with the help of the application on the internet (A) and can remove the products that they will not use for VAT refund from the products for which VAT refund will be received from the interface in the application. With the help of the mobile application or the departure terminal (10), it can check out the country at the departure points. Geo-fence facilities are used to determine the location of the tourist. If the tourist does not need to be checked by the customs inspection officer, the tourist continues non-stop, and his documents are automatically stamped by the customs server (7). The refund of the stamped documents is conveyed to the tourist by the server (5) as soon as possible. In addition, by using the application, the tourist can perform transactions such as querying the server (5) and database (6) via the internet (A), where and what amount of shopping he has made, ongoing and finalized VAT refund transactions, viewing his E-Invoices, and using them for guarantee.

[0030] The retailer must first register with the system (1) via the mobile application or website (3). The retailer transmits the requested information (ID photo, selfie, store address, store license, payment options, etc.) to the server (5) through the application during the registration phase. The retailer matches the tourist with the E-Invoice by reading the tourist's QR code with the help of a POS machine (3) or a tablet/laptop (4). The retailer sends the matched E-Invoice to the server (5) over the internet (A). It is automatically checked by the customs server (7) whether the tourist meets the appropriate conditions for refund. A refund is provided to the retailer (POS machine (3) or tablet/laptop (4)) via the server (5). The

server (5), the retailer and the tourist are informed about the confirmation status of the transaction on their own screens (smartphone (2), POS machine (3), tablet/laptop (4)). After the tourist's transactions at the departure terminal (10), the retailer can see the stamped documents via the application and can approve the payment for the refund. In addition, by using the application, the retailer has the opportunity to see the products going abroad, the VAT amounts to be refunded, which tourists are buying which products, which countries the products go to, the legally valid TaxFree documents for tax declaration and similar information.

[0031] The server (5) is located at the central point between the tourist, retailer and the customs. During the realization process of the transactions, management and control are performed by the server (5). The server (5) registers to the database (6) with the information sent by the tourist via the mobile application and provides the tourist with a special QR code. The retailer, where the tourist makes purchases, matches the payment point (POS machine (3), tablet/laptop (4)), data matrix and E-Invoice with the TaxFree form automatically filled by the server (5) and stored in the database (6). Then, sending and customs feedback of these documents are provided between the retailer infrastructure (POS machine (3), tablet/laptop (4)) and the server (5). Until the documents are stamped, the changes to be made by the tourist are carried out through the server (5) and the database (6). The recalculation of the VAT amount resulting from these changes is made automatically by the server (5) and the database (6) transmitted to the customs server (7) and the customs database (8). The documents stamped and sent by the customs are forwarded to the tourist and the retailer and the transaction is finalized. Digitally stamped documents are stored in the database (6) in an unalterable way. The digitally stamped TaxFree documents (TaxFree form, E-Invoice) including the VAT refund amount are automatically transmitted to the retailer by the server (5) and payment is requested. After the payment transaction is approved by the retailer, the money sent to the server (5) is refunded to the tourist. Users can communicate with a customer service specialist or chat robot through the system (1) via mobile application or website. In addition, customer service can be reached via telephone.

[0032] The solution offered by the system (1) also includes digital systems to be used by the customs. Between the digital systems of the customs (customs server (7), customs database (8), inspection terminal (9), departure terminal (10) and the service of the system (1) (server (5), database (6)) is an internet (A) network with communication function. Thanks to this internet (A) network, transfers of tourist information, retailer information, invoices and approval documents are easier and faster. When the invoice paired with the tourist is sent to the server (5), it is possible to check whether the tourist and the products are suitable for refund. This control is provided through the customs server (7) and the customs

database (8). Thanks to this internet (A) network, the retailer and the tourist has the opportunity to see every stage of the transactions with the help of mobile application and website. Tourists can perform VAT refund transactions (TaxFree) at the time of exit from the country through the application on their smartphone (2) at the departure points or with the help of the departure terminals (10) (customs self-service) located at the departure points. Tourist and TaxFree documents are checked on the customs server (7) according to the rules (risk profiles) determined by the state. As a result of these processes, the tourist is notified via the departure terminals (10) or smartphone (2) whether the tourist will pass the control of the inspection officer. If there is no violation of the rules (risk profiles), the documents are automatically and digitally stamped by the customs server (7). In cases where the tourist needs to be checked by the inspection officer, these procedures can be carried out with the help of the inspection terminal (9) located in front of the officer. After carrying out the necessary checks, the officer can request changes from the customs server (7) with the help of the inspection terminal (9) or can have the documents stamped by making a request to the customs server (7). Stamped documents and tourist information are transmitted from the customs server (7) to the server (5) via the internet (A) network. Digitally stamped documents are stored in the customs database (8) in an unalterable way.

Claims

1. A system (1) that presents significant conveniences in terms of digitalization, time saving and security in the triad of tourists, governments and retailers, **characterized by comprising**

- ❖ a smartphone (2), which provides the tourist to digitally register with the system (1) and has a special QR code containing his/her information after registration, which provides the tourist to connect with the system (1) and the retailer, and which stores various private information,
- ❖ a POS machine (3), which reads the QR code on the tourist's smartphone (2) at the point of sale and shares the shopping information with the system (1),
- ❖ a tablet/laptop (4), which provides the retailer to digitally register with the system (1) and access the system (1), read the QR code on the tourist's smartphone (2) and share shopping information with the system (1),
- ❖ a server (5), which processes and matches retailer information, tourist information in the QR code and electronic invoice information sent over the internet (A) from smartphone (2), POS machine (3) and tablet/laptop (4) and which transmits the paired information to the smart-

phone (2) and uploads this information to the account made by the tourist,

- ❖ a database (6), which provides that the information on the server (5) is stored in an encrypted manner,

- ❖ a customs server (7), which communicates with a smartphone (2), POS machine (3), tablet/laptop (4) and server (5) over the internet (A), receives the matching information processed by the server (5), makes evaluations according to the determined risk profiles and as a result of these evaluations, decides whether the tourist needs to be checked by the inspection officer, if the tourist decides to pass the inspection of the inspection officer, transmits this decision to the tourist's smartphone (2) if the tourist decides to pass the inspection by the inspection officer, and automatically stamps the tourist's documents if it decides that the tourist does not need to be checked by the inspection officer,

- ❖ a customs database (8), which provides that the information contained in the customs server (7) is stored in an encrypted manner,

- ❖ an inspection terminal (9), which provides the officer to make approve, changes and similar transactions, when the tourist comes to the inspection officer's control, if the tourist receives a notification that he needs to appear to the customs inspection officer, the tourist's products are checked by the officer and the officer makes a positive or negative decision after the control and, if the officer decides positively, it provides digital stamping of tourist documents, and

- ❖ a departure terminal (10) which is the station where the tourist visits for departure procedures, which provides the digitally stamped documents to be sent to the smartphone (2) and tablet/laptop (4) at the automatic or inspection terminal (9) via the customs server (7) and to request VAT refund from the retailer.

2. The system according to the claim 1, **characterized by comprising** the server (5) which

- ❖ is the central to all transactions,
- ❖ sequences and manages the transactions that will take place,
- ❖ stores the information sent by the users (retailer, tourist) who want to register via the internet (A) from the smartphone (2), the POS machine (3) and the tablet/laptop (4),
- ❖ creates a special QR code for the smartphone (2), POS machine (3) and tablet/laptop (4) and sending it to the users' applications,
- ❖ matches the tourist, retailer and invoice information with the help of the QR code scanned during the payment at the end of the shopping and automatically filling the TaxFree form,

- ❖ processes the arrangements made in the list of products to be refunded by the tourist and recalculating the amount to be refunded after the change,
- ❖ manages the checkout procedures at the departure points from the country, 5
- ❖ sends documents digitally stamped by customs to smartphone (2), POS machine (3) and tablet/laptop (4) via internet (A) via application,
- ❖ requests the refund amount from the POS machine (3) or tablet/laptop (4) at the end of the transaction and sending the refund of the purchase to the smartphone (2), and 10
- ❖ writes all information and documents in encrypted form to the database (6), 15

3. The system according to the claim 1, **characterized by comprising** the customs server (7) which

- ❖ serves to process and direct customs information, 20
- ❖ checks the accuracy and incompleteness of the documents sent by the server (5),
- ❖ provides the control of the sent documents according to the profile rules determined by the customs and the state and deciding whether the tourist will pass the inspection as a result of the control, 25
- ❖ digitally stamps the documents, saves them in the customs database (8) and sends them to the server (5) for refund transactions, when a positive result is obtained as a result of the controls, 30
- ❖ reads and reports various information from the customs database (8) during and after the process. 35

4. The system according to the claim 1, **characterized by comprising** a departure terminal (10) which is the station where the tourist can exit the country at the point of departure from the country, which provides the tourist to arrange the VAT refundable shopping list and apply for a digital stamp and which provides a refund that the customs inspection officer must pass the control or that the documents are automatically and digitally stamped. 40 45

5. The system according to the claim 1, **characterized by comprising** an inspection terminal (9), which is the station connected to the customs server (7) that the officer will use for approval, change and similar control processes when the inspection officer comes to the control, and which provides to stamp the documents digitally on the customs server (7) with the approval of the inspection officer at the end of the controls. 50 55

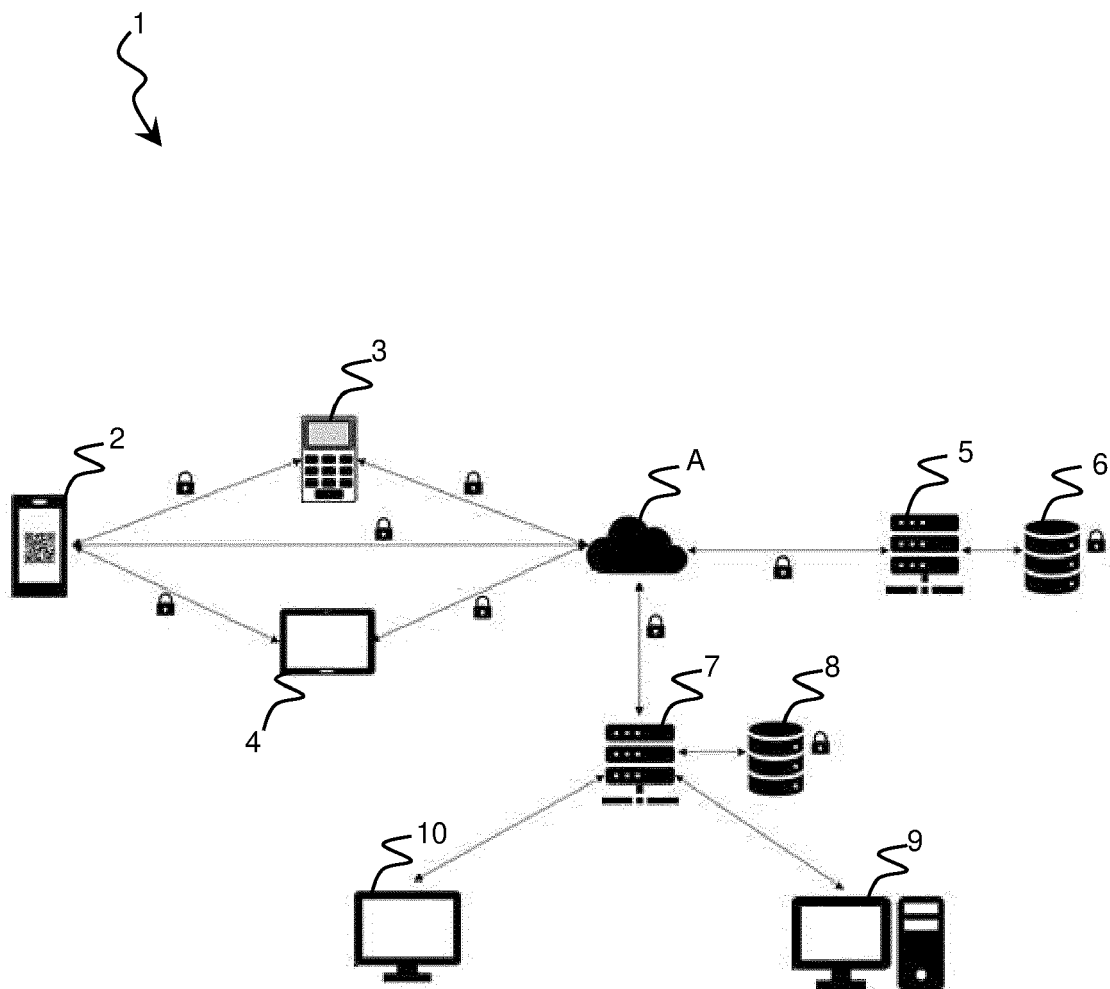


Figure 1



EUROPEAN SEARCH REPORT

Application Number

EP 21 20 5978

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2019/194750 A1 (TOUREGO GLOBAL PTE LTD [SG]) 10 October 2019 (2019-10-10) * the whole document *	1-5	INV. G06Q30/04
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A	KR 101 484 507 B1 (GLOBAL TAX FREE CO LTD [KR]) 20 January 2015 (2015-01-20) * the whole document *	1-5	
			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		12 April 2022	Falierou, Christina
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 21 20 5978

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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REFERENCES CITED IN THE DESCRIPTION

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