

DECLARATION OF HARVETTA ASAMOAH

I, Harvetta Asamoah, pursuant to 28 U.S.C. § 1746, hereby declare as follows:

1. I am a Translator at TransPerfect, Inc.
2. I submit this declaration to certify the accuracy of the English translation of WO 2005/043857 A1.
3. My statements are based on personal knowledge and my review of WO 2005/043857 A1 and its Spanish to English translation. If called as a witness about the facts contained in these statements, I could testify competently based on such personal knowledge and the investigation I have conducted.
4. Attached as Exhibit A is a true and accurate copy of WO 2005/043857 A1.
5. Attached as Exhibit B is a true and accurate copy of an English translation of WO 2005/043857 A1 (“WO 2005/043857 A1 Translation”) that I understand was submitted in IPR2025-01356, IPR2025-01326, IPR2026-00277, and IPR2026-00279 along with a declaration by Simon Critchley.
6. WO 2005/043857 A1 Translation is a true and accurate translation of WO 2005/043857 A1 from Spanish to English, although I would make several minor clerical or technical changes identified below:
 - Some information was not fully carried over from the Spanish to

the English versions of the International Search Report. On the first “International Search Report” page in the lower section,

- I would change “Name and mailing address of the ISA/” to “Name and mailing address of the Agency responsible for the international search”. I would change “S.P.T.O.” to “O.E.P.M. (Oficina Española de Patentes y Marcas) [Spanish Patents and Trademarks Office]”. I would change “Facsimile No.” to “C. Panamá 1, 28071, Madrid, Spain Fax No. +34 91 3495304”. I would include in the “Authorized officer” box “M. Alvarez Moreno” and in the telephone number box “+34 91 34954 95”. And in the very bottom left, I would change “July 1992” to “July 1998” on both that page and the next.
- On page 2, line 13, I would change “storage capacity of the documents” to “capacity to store the documents”.
- On page 4, line 6, I would change “means of emitting data” to “means of sending data”.
- On page 5, line 1, I would change “The method that is the subject-matter of the present invention” to “The method that is the object of the present invention”.

- On page 6, line 8 or (g), I would change “Recognizing, verifying, and electronically treating and processing the information” to “Recognizing, verifying, and electronically handling and processing the information”.
- On page 9, line 3, I would change “the subject-matter of this invention” to “the object of this invention”.
- On page 15, line 8 or (g), I would change “Recognizing, verifying, and electronically treating and processing the information” to “Recognizing, verifying, and electronically handling and processing the information.”

7. For clarity, I have attached a complete version of the Garcia Translation with these changes as Exhibit C. I prepared Exhibit C based on my personal knowledge of the Spanish and English languages and it is a true and accurate translation of WO 2005/043857 A1 from Spanish to English.

8. All statements made herein of my own knowledge are true, and all statements made on information and belief are believed to be true. Further, I am aware that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001. I declare under penalty of perjury that the foregoing is true and correct.

9. I also understand that by submitting this declaration I may be asked to appear for a deposition asking me questions limited to the material in my declaration. With my signature below, I agree to make reasonable efforts to make myself available for such a deposition at a reasonable place and time of my choosing.

* * *

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on May 19, 2026, at Jacksonville, Florida.

Harvetta Asamoah
Harvetta Asamoah

EXHIBIT A

(12) SOLICITUD INTERNACIONAL PUBLICADA EN VIRTUD DEL TRATADO DE COOPERACIÓN
EN MATERIA DE PATENTES (PCT)(19) Organización Mundial de la Propiedad
Intelectual
Oficina internacional(43) Fecha de publicación internacional
12 de Mayo de 2005 (12.05.2005)

PCT

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WO 2005/043857 A1(51) Clasificación Internacional de Patentes⁷: **H04L 29/00**

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PCT/ES2003/000558

(22) Fecha de presentación internacional:

30 de Octubre de 2003 (30.10.2003)

(25) Idioma de presentación:

español

(26) Idioma de publicación:

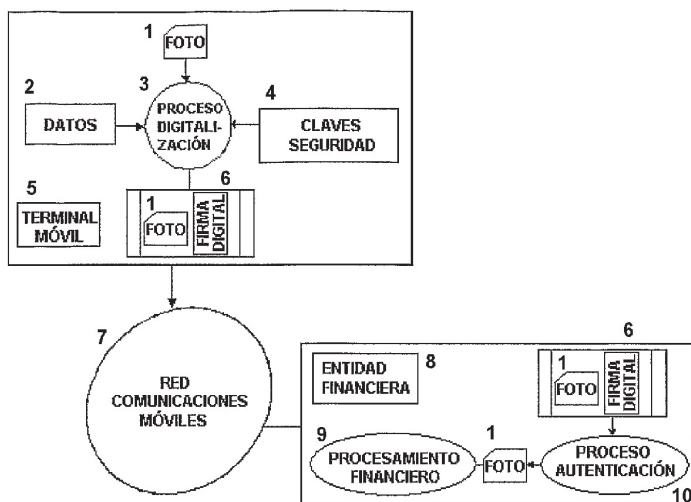
español

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[Continúa en la página siguiente]

(54) Title: METHOD FOR THE TRANSMISSION, AUTHENTICATION AND AUTOMATIC PROCESSING OF DIGITISED
DOCUMENTS(54) Título: MÉTODO DE TRANSMISIÓN, AUTENTICACIÓN Y PROCESAMIENTO AUTÓMATICO DE DOCUMENTOS
DIGITALIZADOS

- 1 PHOTO
2 DATA
3 DIGITISATION PROCESS
4 SECURITY KEYS
5 MOBILE TERMINAL
6 DIGITAL SIGNATURE
7 MOBILE COMMUNICATION NETWORK
8 FINANCIAL INSTITUTION
9 FINANCIAL PROCESSING
10 AUTHENTICATION PROCESS

(57) Abstract: The invention relates to a method for the transmission, authentication and automatic processing of digitised documents in a single session, using a mobile device which is provided with the technological characteristics necessary for the aforementioned processes to be performed. The inventive method also comprises the recognition, verification and electronic processing of the information received by the receiving entity, which is incorporated automatically into the standard processing applied to the above-mentioned document(s). The method is particularly suitable for authenticating, transmitting and automatically processing financial and non-financial documents, such as bank cheques.

(57) Resumen: Método de transmisión, autenticación y procesamiento automático de documentos digitalizados, en una sola sesión, por medio de un dispositivo móvil dotado de las características tecnológicas necesarias para el desarrollo de los procesos anteriormente referidos. Este método incluye asimismo el reconocimiento, verificación y tratamiento electrónico de la información recibida por parte de la entidad receptora a la que se incorpora de manera automática al procesamiento habitual

[Continúa en la página siguiente]

WO 2005/043857 A1

WO 2005/043857 A1

(74) **Mandatario:** URIZAR ANASAGASTI, Jesús, M^a; P^o de la Castellana, 72-1^o, E-28046 Madrid (ES).

(81) **Estados designados (nacional):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Estados designados (regional):** patente ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

patente euroasiática (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), patente europea (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), patente OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaración según la Regla 4.17:

— sobre la calidad de inventor (Regla 4.17(iv)) sólo para US

Publicada:

— con informe de búsqueda internacional

Para códigos de dos letras y otras abreviaturas, véase la sección "Guidance Notes on Codes and Abbreviations" que aparece al principio de cada número regular de la Gaceta del PCT.

que sea objeto el/los documentos referidos. Este método se aplica particularmente para autenticar, transmitir y procesar automáticamente documentos financieros y no financieros, como por ejemplo cheques bancarios.

DESCRIPCIÓN

Método de transmisión, autenticación y
procesamiento automático de documentos
5 digitalizados.

Campo de la invención.

La presente invención, como su propio título
10 indica, se refiere a un método para el procesamiento
y la admisión de documentos, como por ejemplo
cheques bancarios, con garantía de la autenticación
del emisor y del propio documento, utilizando para
su desarrollo medios electrónicos, a través de un
15 dispositivo móvil capaz de capturar y enviar
imágenes a través de una conexión a Internet.

Antecedentes de la invención.

20 Los procesos de banca electrónica conllevan el
empleo de técnicas de transmisión de datos digitales
por medios electrónicos y su tratamiento por parte
de la entidad financiera. En algunos casos, como
puede ser la emisión y cobro de recibos a través de
25 Internet se han establecido estándares que tipifican

y normalizan los ficheros a enviar por el usuario a dicha entidad. No obstante no se ha avanzado en aquellos supuestos en los que las remesas son de, por ejemplo, cheques bancarios, siendo en estos
5 casos necesaria la presencia o el envío de los documentos físicos a la oficina bancaria correspondiente para su proceso, ya sea de forma manual o a través de terminales lectores que capturan ciertos datos de los documentos reales. No
10 se tiene constancia de un sistema de teleproceso que evite la presencia y guarda del documento en la entidad receptora, de forma tal que permita acelerar sustancialmente el proceso de validación del documento y también su almacenamiento por medios
15 electrónicos, con las consiguientes ventajas de rapidez en el proceso y capacidad de almacenamiento de los documentos.

La posibilidad de efectuar pagos o cobros u
20 otros movimientos en una cuenta bancaria utilizando un teléfono u otro terminal móvil como un PDA se ha descrito en diversos documentos, entre los que destacamos los siguientes: DE10114237, JP2002197399, JP2001297198, WO9847116, WO9718653, WO9613814,
25 WO9302424, EP0785534.

También es conocido el documento JP2002140499, que describe un sistema para ejecutar varias funciones en tiempo real a través de un teléfono portátil conectado a Internet, donde despliega menús y formularios de una entidad para realizar a través de ellos diversas funciones relacionadas con los negocios.

10 El documento FR2817107 describe un procedimiento de firma electrónica efectuado a través de un teléfono móvil para permitir así efectuar operaciones financieras a su usuario. El documento EP0247788 se refiere a un sistema de almacenamiento y recuperación de imágenes de un objeto, básicamente
15 la cara del usuario, para mostrarlas más tarde en una pantalla como medio de autenticación de tarjetas de crédito o similares.

20 En el documento WO9736254 se describe un sistema automático de tratamiento de cheques que incluye un dispositivo de entrada de datos relativos a la cuenta corriente y al importe y un medio de captación de una imagen digitalizada del anverso del

cheque que es enviada electrónicamente a través de un ordenador.

En resumen, se han descrito metodologías de
5 tratamiento electrónico de documentos y demás
información bancaria, pero en ninguna de ellas se
emplea la imagen digital del documento para su
almacenamiento en sistemas informáticos ni,
conjuntamente con los anteriores, medios de emisión
10 de datos por parte del usuario y su transmisión por
medio de un teléfono móvil o un equipo portátil
similar.

Descripción de la invención.

15

La presente invención se aplica a la admisión de
documentos, por ejemplo documentos bancarios o
financieros y preferentemente a la validación e
ingreso en la cuenta existente en una entidad
20 bancaria de cheques por parte de un usuario
empleando un dispositivo móvil con cámara
incorporada, capaz de capturar y transmitir imágenes
digitales, además de realizar las operaciones
habituales de telefonía.

25

El método objeto de la presente invención se desarrolla en una sesión interactiva efectuada en tiempo real, durante la cual el usuario utiliza su teléfono móvil como medio de comunicación y
5 transmisión de un documento a la entidad receptora del mismo, la cual lo almacena, procesa y en su caso valida de forma automática, comunicando al usuario su conformidad o no con la operación realizada. En este proceso se sigue la siguiente metodología:

10

a) La identificación del usuario que abre una sesión interactiva con la entidad receptora a través del operador de comunicaciones móviles.

15 b) La introducción de diversos datos de reconocimiento del usuario, consistentes en claves de seguridad para su identificación y autenticación, pudiendo éstas ser un número secreto, un número de teléfono asociado y su
20 matrícula (IMEI), así como datos asociados al propio documento, como por ejemplo, el importe y/o número del documento.

c) La captación de al menos una imagen digital del
25 documento.

d) El cifrado y la certificación digital de los datos y/o imágenes capturadas en los puntos anteriores.

5 e) La transmisión de la imagen digital y de los datos de reconocimiento, una vez cifrados, a la entidad que ha de aceptar el documento.

f) La visualización por parte del usuario de la
10 imagen digital de forma inmediata.

g) El reconocimiento, verificación y el tratamiento y procesamiento electrónico de la información recibida por parte de dicha entidad.

15

Según una importante característica de la presente invención tanto la captación de imágenes, como introducción de datos, cifrado de los mismos y transmisión de datos e imágenes y demás operaciones
20 descritas en los apartados a), b), c), d) y e) se realizan con un dispositivo móvil con cámara digital incorporada, capaz de capturar y transmitir imágenes digitales, además de las operaciones habituales de telefonía.

25

Los datos empleados para reconocimiento del usuario, consisten en aquellos que son propios del operador de comunicaciones móviles, como pueden ser: el número del teléfono móvil, el número del dispositivo móvil, y opcionalmente un sistema de geolocalización y los que son propios de la entidad receptora, como pueden ser, unas claves de autenticación consistentes en un identificativo de usuario y contraseña, un número secreto en cualesquiera de sus formatos. La unión de todos estos elementos, lógicos y físicos, implementa un mecanismo de seguridad novedoso por la combinación de elementos de identificación y autenticación propios de la entidad receptora y del operador de comunicaciones móviles.

Durante todo el proceso existe una comunicación constante entre el usuario y la entidad financiera a través de la operadora de comunicaciones móviles.

20

Con este sistema se logra una mayor sencillez, rapidez y seguridad en el proceso de admisión de documentos y efectos bancarios y particularmente en el ingreso de cheques, desplazando la tradicional lectora de cheques por un dispositivo móvil

5 multipropósito. El procesamiento inmediato de la información transmitida por este sistema y su tratamiento electrónico permite la inmediata disponibilidad en cuenta por parte del usuario y la
10 eliminación de mecanización manual por parte de la entidad, que ve así reducida la mano de obra necesaria ya que el proceso de truncamiento se efectúa por dispositivos remotos ajenos a la entidad financiera. El usuario de este servicio evita
15 desplazamientos innecesarios a la oficina bancaria para presentación de sus documentos al cobro, y la visualización inmediata de la imagen en su cuenta. En general este sistema facilitará la implantación de la banca electrónica para efectuar las gestiones
a las que se destine.

Para la mejor comprensión de cuanto queda descrito en la presente memoria se acompañan unos dibujos en los que a título de ejemplo se representa
20 un caso práctico de realización según el método aquí preconizado, en dichos planos:

Descripción de las figuras.

La figura 1 muestra esquemáticamente el desarrollo del método de autenticación y transmisión de documentos, objeto de esta invención.

5 La figura 2 muestra los medios habituales empleados en este método de autenticación.

Realización preferente de la invención.

10 Tal y como se observa en la figura 1, el método de admisión de documentos y efectos bancarios con garantía de origen, esto es, identificación y autenticación del emisor de los documentos requiere el empleo de un equipo móvil por parte del usuario
15 del servicio, un proveedor de servicios de comunicaciones móviles y también un equipo informático en la entidad suministradora del servicio al usuario.

20 El equipo necesario por parte del usuario ha de permitirle:

a) La identificación del usuario a efectos de lo cual, el usuario, abre una aplicación informática
25 en el teléfono móvil en la cual se establece una

sesión interactiva con la entidad receptora a través del operador de comunicaciones móviles.

b) La introducción por parte del usuario de diversos
5 datos para su reconocimiento, consistentes en usuario y contraseña y selección de la empresa beneficiaria.

c) Identificación del dispositivo en relación con el
10 usuario, comprobación del número de teléfono asociado y su matrícula (IMEI).

d) La captación de la imagen digital del anverso y del reverso del documento.

15

e) La captación de datos asociada al documento, como por ejemplo, el importe y el número de cheque.

f) El cifrado y la certificación digital de los datos
20 y/o imágenes capturadas en los puntos anteriores.

g) La transmisión de la imagen digital y de los datos de reconocimiento, una vez cifrados, a la entidad que ha de aceptar el documento.

25

El equipo móvil que efectúa los procesos de captura, digitalización y procesamiento iniciales consiste en un terminal móvil telefónico dotado de las características y funcionalidades necesarias para tal fin, particularmente un teléfono móvil con cámara y capacidad de procesamiento.

Por su parte, en la entidad que presta el servicio son necesarios unos medios de reconocimiento, verificación y tratamiento electrónico de la información enviada por el usuario. Estos medios son básicamente un equipo informático conectado a Internet, que dispone de un sistema de reconocimiento óptico (OCR), un sistema de autenticación de claves y un medio de transmisión de datos al sistema de procesamiento de documentos de la entidad. La entidad receptora pone a disposición del usuario una imagen digital del documento, en su cuenta bancaria y procesa por los medios habituales (sistemas de truncamiento) el documento que esta tratando.

El nexo de comunicación entre cada usuario y la entidad consiste en una red de telecomunicaciones de telefonía móvil, por ejemplo una red GSM/GPRS o

cualquier tecnología futura con las capacidades tecnológicas adaptadas a las demandas presentes y futuras del método de referencia.

5 En una realización preferencial este método se aplica a la autenticación del beneficiario del cheque bancario, cuyo documento original es digitalizado con un dispositivo móvil que incorpora una cámara digital capaz de obtener una fotografía
10 digital del mismo, por una o por ambas caras. A través del teclado el usuario introduce los datos identificativos anteriormente referidos, como el importe del cheque y todos aquellos datos y claves necesarias para la operatividad del sistema,
15 procediendo a su envío. Una vez cifrado el mensaje y acompañado de una certificación digital, a través de la red móvil (GSM, GPRS o cualquier tecnología futura) de una compañía operadora de telecomunicaciones. La entidad receptora del mensaje
20 procede a su validación y cifrado, obteniendo finalmente una fotografía digital del cheque y una serie de datos que le permiten procesar de forma automática el ingreso del referido cheque en la cuenta del usuario del servicio. Finalmente el
25 método prevé la transmisión de un mensaje SMS o

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cualquier otro método al usuario indicándole la realización de la operación con éxito o no y en su caso el estado de la operación efectuada, si fue ingresado, rechazado.

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REIVINDICACIONES

1.- Método de transmisión, autenticación y procesamiento automático de documentos digitalizados, por ejemplo de documentos financieros y no financieros, **caracterizado** porque comprende las siguientes fases o etapas:

a) La identificación del usuario que abre una sesión interactiva con la entidad receptora a través del operador de comunicaciones móviles.

b) La introducción de diversos datos de reconocimiento del usuario, consistentes en claves de seguridad para su identificación y autenticación, como por ejemplo un número secreto; datos de reconocimiento del dispositivo móvil, pudiendo éstos ser un número de teléfono asociado y su matrícula (IMEI); y también datos asociados al propio documento, como por ejemplo, el importe y/o número del documento.

c) La captación de al menos una imagen digital del documento.

d) El cifrado y la certificación digital de los datos y/o imágenes capturadas en los puntos anteriores.

e) La transmisión de la imagen digital y de los datos de reconocimiento, una vez cifrados, a la entidad que ha de aceptar el documento.

f) La visualización por parte del usuario de la imagen digital de forma inmediata.

10

g) El reconocimiento, verificación, tratamiento y procesamiento electrónico de la información recibida por parte de dicha entidad.

15 2.- Método, según la reivindicación 1, **caracterizado** porque tanto la captación de imágenes, como introducción de datos, cifrado de los mismos y transmisión de datos e imágenes y demás operaciones descritas en los apartados a), b), c), d) y e) de la
20 reivindicación 1, se realizan con un dispositivo móvil con cámara digital incorporada, capaz de capturar y transmitir imágenes digitales, además de las operaciones habituales de telefonía.

3.- Método, según las reivindicaciones 1 y 2, **caracterizado** porque los datos empleados para reconocimiento del usuario, consisten en aquellos que son propios del operador de comunicaciones móviles, como pueden ser: el número del teléfono móvil, el número del dispositivo móvil, y opcionalmente un sistema de geolocalización y los que son propios de la entidad receptora, como pueden ser, unas claves de autenticación consistentes en un
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identificativo de usuario y contraseña, un número secreto en cualesquiera de sus formatos; de forma que la unión de todos estos elementos, lógicos y físicos, implementa un mecanismo de seguridad que es combinación de elementos de identificación y autenticación propios de la entidad receptora y del operador de comunicaciones móviles.

4.- Método, según cualquiera de las reivindicaciones anteriores, **caracterizado** porque se aplica
20
preferencialmente a la validación e ingreso en cuenta de cheques en una entidad bancaria directamente por parte de un usuario desde su teléfono móvil a través de su operador de comunicaciones móviles.

1/1

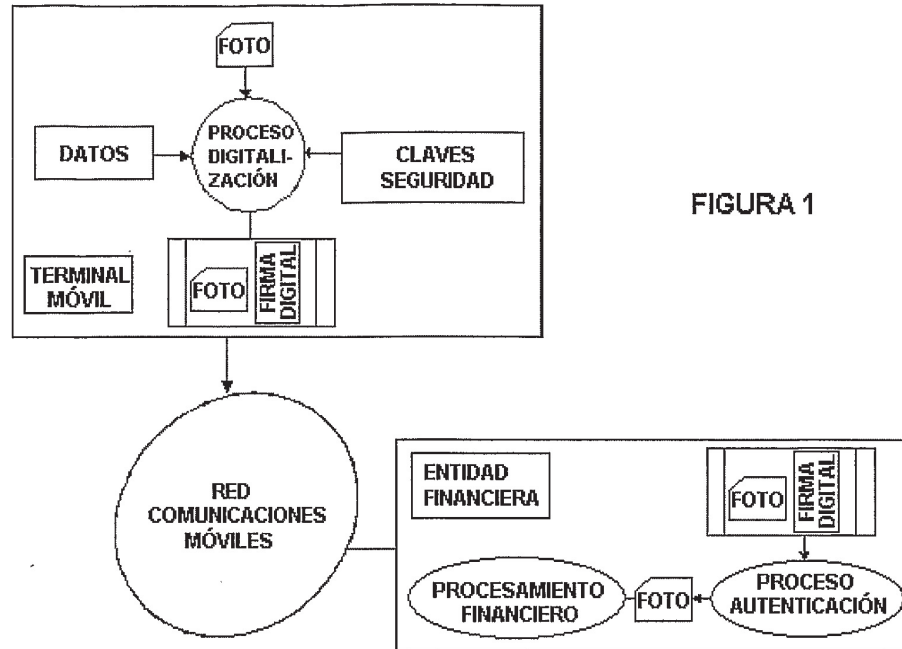


FIGURA 1

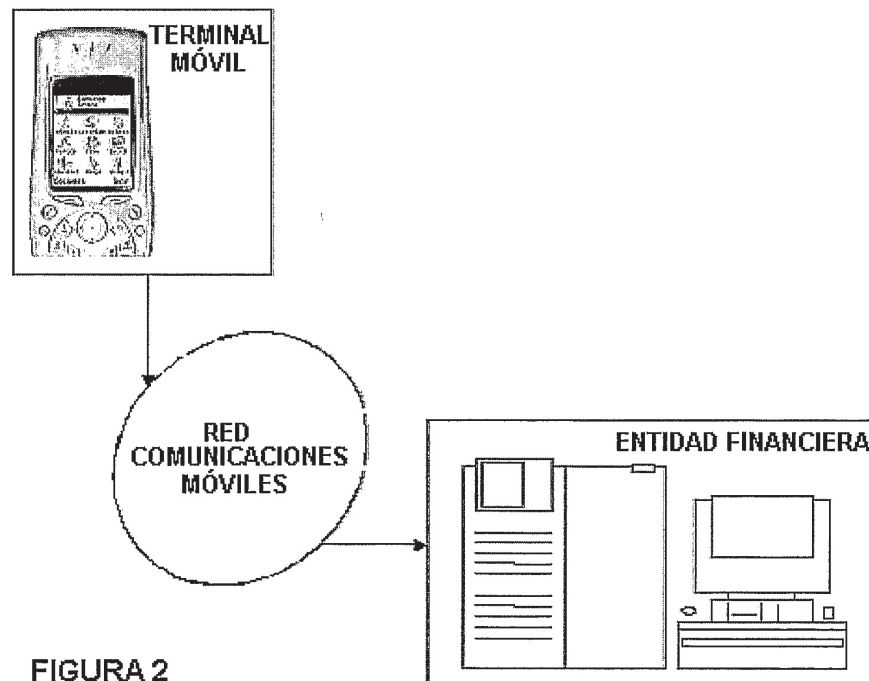


FIGURA 2

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES 03/00558

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷ H04L 29/00

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷ H04L, G06F

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

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

EPODOC, WPI, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US2003115454 A1(PIIKIVI et al) 19.06.2003, the whole document	1-4
A	EP1328103 A1(DREAM TEAM.) 16.07.2003, column 1, line 1-column 2, line 30	1,3
A	US6269446 B1(SCHUMACHER et al.) 31.07.2001, the whole document	1



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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

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

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

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

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

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

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

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

"&" document member of the same patent family

Date of the actual completion of the international search

30 March 2004 (30.03.2004)

Date of mailing of the international search report

06 April 2004 (06.04.2004)

Name and mailing address of the ISA/

S.P.T.O.

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/ES 03/00558

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US2003115454 A1	19.06.2003	GB2377042 A	31.12.2002
EP1328103 A1	16.07.2003	ITMO20020006 A	10.07.2003
		US2003131244 A	10.07.2003
		EP1328103 A	16.07.2003
US6269446 B1	31.07.2001	none	none

INFORME DE BÚSQUEDA INTERNACIONALSolicitud internacional nº
PCT/ES 03/00558**A. CLASIFICACIÓN DEL OBJETO DE LA SOLICITUD**CIP⁷ H04L 29/00

De acuerdo con la Clasificación Internacional de Patentes (CIP) o según la clasificación nacional y la CIP.

B. SECTORES COMPRENDIDOS POR LA BÚSQUEDA

Documentación mínima consultada (sistema de clasificación, seguido de los símbolos de clasificación)

CIP⁷ H04L, G06F

Otra documentación consultada, además de la documentación mínima, en la medida en que tales documentos formen parte de los sectores comprendidos por la búsqueda

Bases de datos electrónicas consultadas durante la búsqueda internacional (nombre de la base de datos y, si es posible, términos de búsqueda utilizados)

EPODOC, WPI, INSPEC

C. DOCUMENTOS CONSIDERADOS RELEVANTES

Categoría*	Documentos citados, con indicación, si procede, de las partes relevantes	Relevante para las reivindicaciones nº
X	US2003115454 A1(PIIKIVI et al) 19.06.2003, todo el documento	1-4
A	EP1328103 A1(DREAM TEAM.) 16.07.2003, columna 1, línea 1-columna 2, línea 30	1,3
A	US6269446 B1(SCHUMACHER et al.) 31.07.2001, todo el documento	1

☐ En la continuación del recuadro C se relacionan otros documentos
 ☒ Los documentos de familia de patentes se indican en el anexo

* Categorías especiales de documentos citados:

"A" documento que define el estado general de la técnica no considerado como particularmente relevante.

"E" solicitud de patente o patente anterior pero publicada en la fecha de presentación internacional o en fecha posterior.

"L" documento que puede plantear dudas sobre una reivindicación de prioridad o que se cita para determinar la fecha de publicación de otra cita o por una razón especial (como la indicada).

"O" documento que se refiere a una divulgación oral, a una utilización, a una exposición o a cualquier otro medio.

"P" documento publicado antes de la fecha de presentación internacional pero con posterioridad a la fecha de prioridad reivindicada.

"T" documento ulterior publicado con posterioridad a la fecha de presentación internacional o de prioridad que no pertenece al estado de la técnica pertinente pero que se cita por permitir la comprensión del principio o teoría que constituye la base de la invención.

"X" documento particularmente relevante; la invención reivindicada no puede considerarse nueva o que implique una actividad inventiva por referencia al documento aisladamente considerado.

"Y" documento particularmente relevante; la invención reivindicada no puede considerarse que implique una actividad inventiva cuando el documento se asocia a otro u otros documentos de la misma naturaleza, cuya combinación resulta evidente para un experto en la materia.

"&" documento que forma parte de la misma familia de patentes.

Fecha en que se ha concluido efectivamente la búsqueda internacional. 30.03.2004

Fecha de expedición del informe de búsqueda internacional

06 ABR 2004

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FIFTH THIRD EX1003

INFORME DE BÚSQUEDA INTERNACIONAL
 Información relativa a miembros de familias de patentes

Solicitud internacional nº

PCT/ES 03/00558

Documento de patente citado en el informe de búsqueda	Fecha de publicación	Miembro(s) de la familia de patentes	Fecha de publicación
US2003115454 A1	19.06.2003	GB2377042 A	31.12.2002
EP1328103 A1	16.07.2003	ITMO20020006 A	10.07.2003
		US2003131244 A	10.07.2003
		EP1328103 A	16.07.2003
US6269446 B1	31.07.2001	NINGUNO	NINGUNO

EXHIBIT B

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COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
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(43) International publication date
May 12, 2005 (05.12.2005)

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(51) International Patents Classification⁷: H04L 29/00

(21) International application number:

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(22) International filing date:

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(25) Filing language:

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(26) Publication language:

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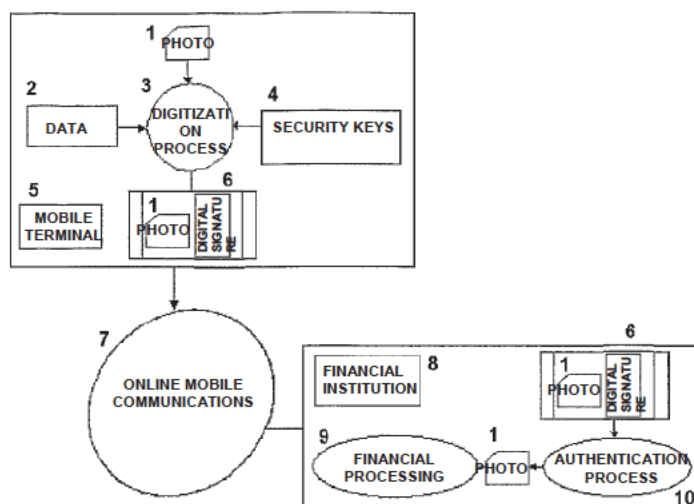
(71) Applicants (for all States except US): BANKINTER S.A. [ES/ES]; P^o de la Castellana, 29, E-28032 Madrid (SPAIN). RETEVISION MÓVIL, S.A. [ES/ES]; Avda. de Bruselas 26, E-28100 Alcobendas (SPAIN).

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[Continued on next page]

(54) Title: METHOD OF TRANSMISSION, AUTHENTICATION, AND AUTOMATIC PROCESSING OF DIGITIZED DOCUMENTS



- 1 PHOTO
- 2 DATA
- 3 DIGITIZATION PROCESS
- 4 SECURITY KEYS
- 5 MOBILE TERMINAL
- 6 DIGITAL SIGNATURE
- 7 MOBILE COMMUNICATION NETWORK
- 8 FINANCIAL INSTITUTION
- 9 FINANCIAL PROCESSING
- 10 AUTHENTICATION PROCESS

(57) Abstract: The invention relates to a method for the transmission, authentication and automatic processing of digitized documents in a single session, using a mobile device which is provided with the technological characteristics necessary for the aforementioned processes to be performed. The inventive method also comprises the recognition, verification and electronic processing of the information received by the receiving institution, which is incorporated automatically into the standard processing applied to the above-mentioned document(s). The method is particularly suitable for authenticating, transmitting and automatically processing financial and non-financial documents, such as bank checks.

[Continued on next page]

WO 2005/043857 A1

WO 2005/043857 AI

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Statement according to Rule 4.17:

— on inventorship (Rule 4.17(iv)) only for US

(81) **States designated (domestic):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

Published:

— with international search report

Refer to the "Guidance Notes on Codes and Abbreviations" section for two-letter codes and abbreviations, which appears at the beginning of each regular edition of the PCT Gazette.

(84) **States designated (regional):** ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FT, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

DESCRIPTION

Method for the transmission, authentication and automatic processing of digitized documents.

5 Field of the Invention.

The present invention, as its title implies, relates to a method for processing and accepting documents, such as, for example, bank checks, with guarantee of authentication of the issuer and the
10 document itself, using electronic media for its implementation through a mobile device capable of capturing and sending images via an Internet connection.

Background of the Invention.

15 Electronic banking processes involve the use of digital data transmission techniques via electronic means and their processing by the financial institution. In some cases, such as the issuance and collection of receipts via the
20 Internet, standards have been established that define and standardize the slips to be sent by the user to said institution.

However, no advances have been made in cases in which remittances are, for example, bank checks, because in these cases, physical documents must be present or sent to the respective bank branch for
5 processing, whether manually or via reader terminals that capture certain data from the actual documents. We are not aware of a teleprocessing system that avoids the presence and custody of the document by the receiving institution in such a manner that
10 allows the document validation process to be substantially accelerated, as well as its storage by electronic means, with the resulting advantages of speed in the process and storage capacity of the documents.

15 The possibility of making payments, collections, or other activities in a bank account either by telephone or another mobile terminal, such as a PDA has been described in various documents, among which we can highlight the following:
20 DE10114237, JP2002197399, JP2001297198, WO9847116, WO9718653, WO9613814, WO9302424, EP0785534.

Document JP2002140499 is also known, which describes a system for performing various functions in real-time using a mobile telephone connected to the Internet, which displays an institution's menus and forms in order to perform various business functions through them.

Document FR2817107 describes an electronic signature procedure conducted using a mobile telephone to allow its user to perform financial transactions. Document EP0247788 relates to a system for storing and retrieving images of an object, consisting basically of the user's face, in order to display them later on a screen as a means of authenticating credit cards or similar.

Document W09736254 describes an automatic check processing system, which includes a device to input data related to the checking account and the amount, as well as means to capture a digitized image of the obverse of the check, which is sent electronically through a computer.

In summary, methodologies for electronic processing of documents and other banking information have been described, but none of these use the digital image of the document for storage
5 in computer systems nor, in conjunction with the foregoing, means of emitting data by the user and the transmission thereof via a mobile telephone or similar portable equipment.

10 **Description of the Invention.**

The present invention applies to the acceptance of documents, for example, banking or financial documents and preferably to the validation and deposit into the existing account at a banking
15 institution of checks by a user using a mobile device that incorporates a camera, capable of capturing and transmitting digital images, as well as performing the usual telephony operations.

The method that is the subject-matter of the present invention is implemented in an interactive session conducted in real time, during which the user uses his mobile phone as a means of communicating and transmitting a document to the institution receiving said document, which it stores, processes, and, if applicable, validates automatically, informing the user of its acceptance or rejection of the transaction performed. In this process the following methodology is followed:

- a) Identifying the user, which opens an interactive session with the receiving institution through the mobile communications operator.
- b) Entering various user recognition data, consisting of security keys for the user's identification and authentication, which may be a secret number, an associated telephone number and code (IMEI), as well as data associated with the document itself, such as the amount and/or the document number.
- c) Capturing at least one digital image of the document.

- d) Digitally encrypting and certifying the data
and/or images captured in the previous points.
- e) Transmitting the digital image and the
recognition data, once encrypted, to the
5 institution that must accept the document.
- f) The immediate displaying of the digital image by
the user.
- g) Recognizing, verifying, and electronically
treating and processing the information received
10 by said institution.

According to an important feature of the
present invention, both the capture of images and
the entry of data, the encryption thereof and the
15 transmission of data and images and the other
operations described in sections a), b), c), d), and
e) are performed with a mobile device with
incorporated digital camera, able to capture and
transmit digital images, as well as the usual
20 telephony operations.

The data used for recognizing the user consist of those specific to the mobile communications operator, which may be the mobile telephone number, the mobile device number, and optionally, a global positioning system and those that are specific to the receiving institution, which may be authentication codes consisting of a username and password, or a secret number in any format. The combination of all these logical and physical elements implements an innovative security mechanism by combining identification and authentication elements specific to the receiving institution and to the mobile communication operator.

There is constant communication between the user and the financial institution via the mobile communications operator during the entire process.

This system achieves greater simplicity, speed, and security in the process of accepting bank documents and bills, and particularly in depositing checks, by replacing the traditional check reader with a multi-purpose mobile device. The immediate

processing of the information transmitted by this system and the electronic treatment thereof allows the immediate availability in the user's account and the elimination of manual mechanization by the institution, which thus reduces the labor necessary because the truncation process is performed by remote devices external to the financial institution. The user of this service avoids unnecessary trips to the bank branch to present documents for collection, and the immediate display of the image in his account. In general, this system will facilitate the implementation of electronic banking in order to perform the transactions for which it is intended.

For a better understanding of the description provided in this document, certain drawings are included as examples of one embodiment according to the method here recommended, in said drawings:

Description of the Figures.

Figure 1 schematically depicts the implementation of the method of authentication and transmission of documents, the subject-matter of this invention.

5

Figure 2 depicts the usual means used in this authentication method.

Preferred embodiment of the Invention.

10

As can be observed in Figure 1, the method of accepting banking documents and bills with guarantee of origin, i.e., identifying and authenticating the issuer of the documents requires the use of a mobile device by the user of the service, a mobile communications services provider and also computer equipment at the institution that provides the service to the user.

15

The equipment required by the user must allow:

20

a) Identifying of the user, for which said user opens a computer application in the mobile

telephone in which an interactive session is established with the receiving institution through the mobile communications operator.

- 5 b) Entering by the user of different recognition data consisting of username and password and selection of the beneficiary company.
- c) Identifying the device in relation to the user, confirmation of the associated telephone number and the code (IMEI).
- 10 d) Capturing the digital image of the obverse and the reverse side of the document.
- e) Capturing the data associated with the document, such as the amount and the check number.
- 15 f) Digitally encrypting and certifying the data and/or images captured in the preceding points.
- g) Transmitting the digital image and the recognition data, once encrypted, to the institution that must accept the document.

The mobile equipment that performs the initial processes of capturing, digitizing, and processing the image consists of a mobile telephone equipped with the features and functions necessary for said purpose, particularly a mobile telephone with camera and processing capacity.

For its part, the institution that renders the service must have certain electronic means of recognizing, verifying and processing the information sent by the user. These means consist basically of computer equipment connected to the Internet that has an optical character recognition (OCR) system, a code authentication system and means of transmitting data to the institution's document processing system. The receiving institution makes available to the user a digital image of the document in its bank account and processes the document in question by the usual means (truncation systems).

The communication link between each user and the institution consists of a mobile telephone communications network, for example a GSM/GPRS

network or any future technology with the technological capabilities adapted to the present and future demands of the method of reference.

In a preferential embodiment, this method
5 applies to authenticating the beneficiary of the bank check, the original document of which is digitized using a mobile device that incorporates a digital camera able to take a digital photograph of one or both sides of said document. Via the keypad
10 the user enters the aforementioned identification data, as well as the amount of the check and all the information and codes necessary for the operability of the system, proceeding with sending it. Once the message is encrypted and accompanied by a digital
15 certification through the mobile network (GSM, GPRS, or any future technology) of a telecommunications operator company. The institution that receives the message proceeds to validate and encrypt it, ultimately obtaining a digital photograph of the
20 check and a data set that allows it to automatically process the deposit of the check in question into the service user's account. Finally, the method

provides for the transmission of an SMS message or
any other method to the user informing him that the
transaction has been completed successfully or not
and, if applicable, the status of the transaction
5 performed, i.e., if it was deposited or rejected.

10

15

20

CLAIMS

1- A method for the transmission,
authentication and automatic processing of
digitized documents, for example, financial and non-
5 financial documents, **characterized** in that it
comprises the following phases or steps:

- a) Identifying the user, which opens an interactive
session with the receiving institution through
10 the mobile communications operator.
- b) Entering various user recognition data,
consisting of security keys for his
identification and authentication, such as for
example a secret number; recognition data of the
15 mobile device, which may be an associated
telephone number and code (IMEI); as well as data
associated with the document itself, such as the
amount and/or the document number.
- c) Capturing at least one digital image of the
20 document.

- d) Digitally encrypting and certifying the data and/or images captured in the preceding points.
- e) Transmitting the digital image and the recognition data, once encrypted, to the
5 institution that must accept the document.
- f) The immediate displaying of the digital image by the user.
- g) Recognizing, verifying, and electronically treating and processing the information received
10 by said institution.

2.- The method according to claim 1, **characterized** in that both the capture of images and the entry of data, encryption thereof and the
15 transmission of data and images and the other operations described in sections a), b), c), d), and e) of claim 1 are performed with a mobile device with incorporated digital camera, able to capture and transmit digital images, as well the usual
20 telephony operations.

3.- The method according to claims 1 and 2, **characterized** in that the data used for recognizing the user consist of those that are specific to the mobile communications operator, which may be the mobile telephone number, the mobile device number, and, optionally, a global positioning system and those specific to the receiving institution, which may be authentication codes consisting of a username and password, a secret number in any format, in such a manner that the combination of all these logical and physical elements implements a security mechanism that is a combination of identification and authentication elements specific to the receiving institution and to the mobile communication operator.

4.- The method according to any of the preceding claims, **characterized** in that it is applied preferably to the validation and deposit in a checking account in a banking institution by a user directly from his mobile telephone via the mobile communications operator.

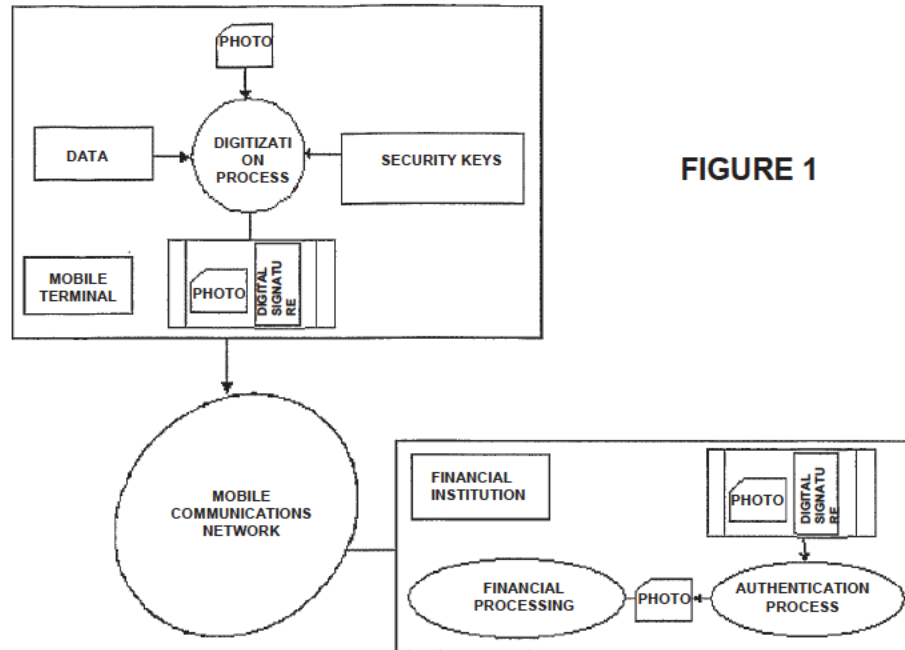


FIGURE 1

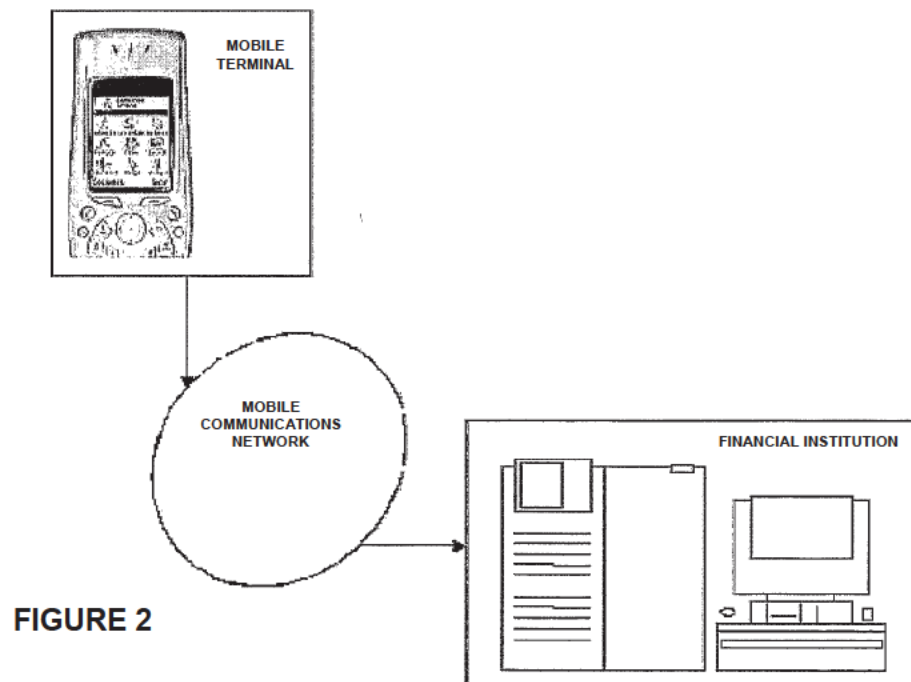


FIGURE 2

EXHIBIT C

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES 03/00558

A. CLASSIFICATION OF SUBJECT MATTERIPC⁷ H04L 29/00

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷ H04L, G06F

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

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

EPODOC, WPI, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US2003115454 A1(PIIKIVI et al) 19.06.2003, the whole document	1-4
A	EP1328103 A1(DREAM TEAM.) 16.07.2003, column 1, line 1- column 2, line 30	1,3
A	US6269446 B1(SCHUMACHER et al.) 31.07.2001, the whole document	1

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
30 March 2004 (30.03.2004)Date of mailing of the international search report
06 April 2004 (06.04.2004)

Name and mailing address of the Agency responsible for the international search:

O.E.P.M.(Oficina Española de Patentes y Marcas)
[Spanish Patent and Trademarks Office]
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/ES 03/00558

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US2003115454 A1	19.06.2003	GB2377042 A	31.12.2002
EP1328103 A1	16.07.2003	ITMO20020006 A US2003131244A EP1328103 A	10.07.2003 10.07.2003 16.07.2003
US6269446B1	31.07.2001	none	none

Form PCT/ISA/210 (patent family annex) (July 1998)

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(51) International Patents Classification: H04L 29/00

(72) Inventors; e

(21) International application number:

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(75) Inventors/Applicants (for US only): RAMOS GARCIA-
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BESGA Alvaro [ES/ES]; Avda. de Bruselas 26 E- 28100
ALCOBENDAS (SPAIN).

(22) International filing date:

October 30, 2003 (10.30.2003)

(25) Filing language:

Spanish

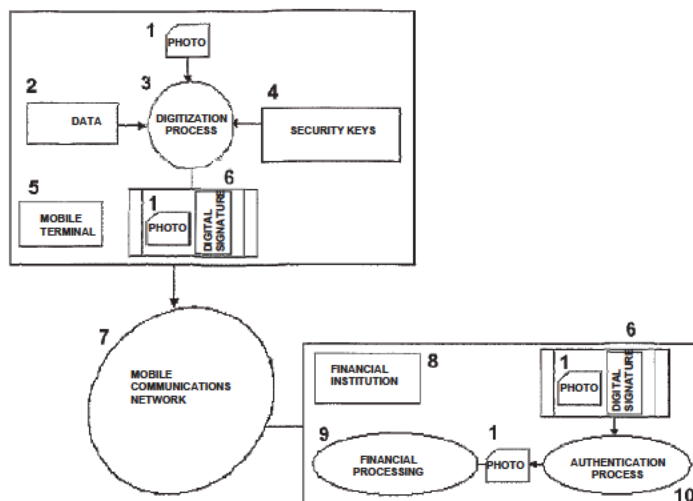
(26) Publication language:

Spanish

(71) Applicants (for all States except US): BANKINTER S.A.
[ES/ES]; Pº de la Castellana, 29, E-28032 Madrid (SPAIN).
RETEVISION MÓVIL, S.A. [ES/ES]; Avda. de Bruselas
26, E-28100 Alcobendas (SPAIN).

[Continued on next page]

(54) Title: METHOD OF TRANSMISSION, AUTHENTICATION, AND AUTOMATIC PROCESSING OF DIGITIZED
DOCUMENTS



- 1 PHOTO
- 2 DATA
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- 8 FINANCIAL INSTITUTION
- 9 FINANCIAL PROCESSING
- 10 AUTHENTICATION PROCESS

(57) Abstract: The invention relates to a method for the transmission, authentication and automatic processing of digitized documents in a single session, using a mobile device which is provided with the technological characteristics necessary for the aforementioned processes to be performed. The inventive method also comprises the recognition, verification and electronic processing of the information received by the receiving institution, which is incorporated automatically into the standard processing applied to the above-mentioned document(s). The method is particularly suitable for authenticating, transmitting and automatically processing financial and nonfinancial documents, such as bank checks.

[Continued on next page]

(74) **Agent:** URIZAR ANASAGASTI, Jesús, Maria; P^ode la Castellana, 72-1^o, E-28046 Madrid (SPAIN).

Statement according to Rule 4.17:

— on inventorship (Rule 4.17(iv)) only for US

Published:

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Refer to the "Guidance Notes on Codes and Abbreviations" section for two-letter codes and abbreviations, which appears at the beginning of each regular edition of the PCT Gazette.

(81) **States designated (domestic):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **States designated (regional):** ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FT, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

which is subject to the referred documents. This method is particularly applicable for authentication, transmission, and automatic processing of financial and non-financial documents, for example, bank checks.

DESCRIPTION

Method for the transmission, authentication and automatic processing of digitized documents.

Field of the Invention.

5 The present invention, as its title implies, relates to a method for processing and accepting documents, such as, for example, bank checks, with guarantee of authentication of the issuer and the document itself, using electronic media for its
10 implementation through a mobile device capable of capturing and sending images via an Internet connection.

Background of the Invention.

15 Electronic banking processes involve the use of digital data transmission techniques via electronic means and their processing by the financial institution. In some cases, such as the issuance and collection of receipts via the Internet, standards have been established that define and
20 standardize the slips to be sent by the user to said institution.

However, no advances have been made in cases in which remittances are, for example, bank checks, because in these cases, physical documents must be present or sent to the respective bank branch for processing, whether manually or via reader terminals that capture certain data from the actual documents. We are not aware of a teleprocessing system that avoids the presence and custody of the document by the receiving institution in such a manner that allows the document validation process to be substantially accelerated, as well as its storage by electronic means, with the resulting advantages of speed in the process and capacity to store the documents.

The possibility of making payments, collections, or other activities in a bank account either by telephone or another mobile terminal, such as a PDA has been described in various documents, among which we can highlight the following: DE10114237, JP2002197399, JP2001297198, WO9847116, WO9718653, WO9613814, WO9302424, EP0785534.

Document JP2002140499 is also known, which describes a system for performing various functions in real-time using a mobile telephone connected to the Internet, which displays an institution's menus and forms in order to perform various business functions through them.

Document FR2817107 describes an electronic signature procedure conducted using a mobile telephone to allow its user to perform financial transactions. Document EP0247788 relates to a system for storing and retrieving images of an object, consisting basically of the user's face, in order to display them later on a screen as a means of authenticating credit cards or similar.

Document WO9736254 describes an automatic check processing system, which includes a device to input data related to the checking account and the amount, as well as means to capture a digitized image of the obverse of the check, which is sent electronically through a computer.

In summary, methodologies for electronic processing of documents and other banking information have been described, but none of these use the digital image of the document for storage in computer systems nor, in conjunction with the foregoing, means of sending data by the user and the transmission thereof via a mobile telephone or similar portable equipment.

Description of the Invention.

The present invention applies to the acceptance of documents, for example, banking or financial documents and preferably to the validation and deposit into the existing account at a banking institution of checks by a user using a mobile device that incorporates a camera, capable of capturing and transmitting digital images, as well as performing the usual telephony operations.

The method that is the object of the present invention is implemented in an interactive session conducted in real time, during which the user uses his mobile phone as a means of communicating and transmitting a document to the institution receiving said document, which it stores, processes, and, if applicable, validates automatically, informing the user of its acceptance or rejection of the transaction performed. In this process the following methodology is followed:

a) Identifying the user, which opens an interactive session with the receiving institution through the mobile communications operator.

b) Entering various user recognition data, consisting of security keys for the user's identification and authentication, which may be a secret number, an associated telephone number and code (IMEI), as well as data associated with the document itself, such as the amount and/or the document number.

c) Capturing at least one digital image of the document.

d) Digitally encrypting and certifying the data and/or images captured in the previous points.

5 e) Transmitting the digital image and the recognition data, once encrypted, to the institution that must accept the document.

f) The immediate displaying of the digital image by the user.

10 g) Recognizing, verifying, and electronically handling and processing the information received by said institution.

15 According to an important feature of the present invention, both the capture of images and the entry of data, the encryption thereof and the transmission of data and images and the other operations described in sections a), b), c), d), and e) are performed with a mobile device with incorporated digital camera, able to capture and
20 transmit digital images, as well as the usual telephony operations.

The data used for recognizing the user consist of those specific to the mobile communications operator, which may be the mobile telephone number, the mobile device number, and optionally, a global positioning system and those that are specific to the receiving institution, which may be authentication codes consisting of a username and password, or a secret number in any format. The combination of all these logical and physical elements implements an innovative security mechanism by combining identification and authentication elements specific to the receiving institution and to the mobile communication operator.

There is constant communication between the user and the financial institution via the mobile communications operator during the entire process.

This system achieves greater simplicity, speed, and security in the process of accepting bank documents and bills, and particularly in depositing checks, by replacing the traditional check reader with a multi-purpose mobile device.

The immediate processing of the information transmitted by this system and the electronic treatment thereof allows the immediate availability in the user's account and the elimination of manual mechanization by the institution, which thus reduces the labor necessary because the truncation process is performed by remote devices external to the financial institution. The user of this service avoids unnecessary trips to the bank branch to present documents for collection, and the immediate display of the image in his account. In general, this system will facilitate the implementation of electronic banking in order to perform the transactions for which it is intended.

For a better understanding of the description provided in this document, certain drawings are included as examples of one embodiment according to the method here recommended, in said drawings:

Description of the Figures.

Figure 1 schematically depicts the implementation of the method of authentication and transmission of documents, the object of this invention.

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Figure 2 depicts the usual means used in this authentication method.

Preferred embodiment of the Invention.

10 As can be observed in Figure 1, the method of accepting banking documents and bills with guarantee of origin, i.e., identifying and authenticating the issuer of the documents requires the use of a mobile device by the user of the
15 service, a mobile communications services provider and also computer equipment at the institution that provides the service to the user.

The equipment required by the user must allow:

- 20 a) Identifying of the user, for which said user opens a computer application in the mobile

telephone in which an interactive session is established with the receiving institution through the mobile communications operator.

- 5 b) Entering by the user of different recognition data consisting of username and password and selection of the beneficiary company.
- c) Identifying the device in relation to the user, confirmation of the associated telephone number and the code (IMEI).
- 10 d) Capturing the digital image of the obverse and the reverse side of the document.
- e) Capturing the data associated with the document, such as the amount and the check number.
- 15 f) Digitally encrypting and certifying the data and/or images captured in the preceding points.
- g) Transmitting the digital image and the recognition data, once encrypted, to the institution that must accept the document.

The mobile equipment that performs the initial processes of capturing, digitizing, and processing the image consists of a mobile telephone equipped with the features and functions necessary for said purpose, particularly a mobile telephone with camera and processing capacity.

For its part, the institution that renders the service must have certain electronic means of recognizing, verifying and processing the information sent by the user. These means consist basically of computer equipment connected to the Internet that has an optical character recognition (OCR) system, a code authentication system and means of transmitting data to the institution's document processing system. The receiving institution makes available to the user a digital image of the document in its bank account and processes the document in question by the usual means (truncation systems).

The communication link between each user and the institution consists of a mobile telephone communications network, for example a GSM/GPRS

network or any future technology with the technological capabilities adapted to the present and future demands of the method of reference.

5 In a preferential embodiment, this method applies to authenticating the beneficiary of the bank check, the original document of which is digitized using a mobile device that incorporates a digital camera able to take a digital photograph of one or both sides of said document. Via the keypad
10 the user enters the aforementioned identification data, as well as the amount of the check and all the information and codes necessary for the operability of the system, proceeding with sending it. Once the message is encrypted and accompanied
15 by a digital certification through the mobile network (GSM, GPRS, or any future technology) of a telecommunications operator company. The institution that receives the message proceeds to validate and encrypt it, ultimately obtaining a
20 digital photograph of the check and a data set that allows it to automatically process the deposit of the check in question into the service user's account.

Finally, the method provides for the transmission of an SMS message or any other method to the user informing him that the transaction has been completed successfully or not and, if applicable, the status of the transaction performed, i.e., if it was deposited or rejected.

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CLAIMS

1- A method for the transmission,
authentication and automatic processing of
digitized documents, for example, financial and
5 nonfinancial documents, **characterized** in that it
comprises the following phases or steps:

a) Identifying the user, which opens an interactive
session with the receiving institution through
10 the mobile communications operator.

b) Entering various user recognition data,
consisting of security keys for his
identification and authentication, such as for
example a secret number; recognition data of the
15 mobile device, which may be an associated
telephone number and code (IMEI); as well as
data associated with the document itself, such
as the amount and/or the document number.

c) Capturing at least one digital image of the
20 document.

- d) Digitally encrypting and certifying the data and/or images captured in the preceding points.
- e) Transmitting the digital image and the recognition data, once encrypted, to the institution that must accept the document.
- f) The immediate displaying of the digital image by the user.
- g) Recognizing, verifying, and electronically handling and processing the information received by said institution.

2.- The method according to claim 1, **characterized** in that both the capture of images and the entry of data, encryption thereof and the transmission of data and images and the other operations described in sections a), b), c), d), and e) of claim 1 are performed with a mobile device with incorporated digital camera, able to capture and transmit digital images, as well the usual telephony operations.

3.- The method according to claims 1 and 2, **characterized** in that the data used for recognizing the user consist of those that are specific to the mobile communications operator, which may be the
5 mobile telephone number, the mobile device number, and, optionally, a global positioning system and those specific to the receiving institution, which may be authentication codes consisting of a username and password, a secret number in any
10 format, in such a manner that the combination of all these logical and physical elements implements a security mechanism that is a combination of identification and authentication elements specific to the receiving institution and to the mobile
15 communication operator.

4.- The method according to any of the preceding claims, **characterized** in that it is applied preferably to the validation and deposit in
20 a checking account in a banking institution by a user directly from his mobile telephone via the mobile communications operator.

