

Court File No. T-1661 -07

FEDERAL COURT

DATATREASURY CORPORATION

Plaintiff

-and-

**ROYAL BANK OF CANADA; BANK OF NOVA SCOTIA; TORONTO-DOMINION
BANK; CANADIAN IMPERIAL BANK OF CANADA; BANK OF MONTREAL;
NATIONAL BANK OF CANADA; SYMCOR INC. and INTRIA ITEMS INC.**

Defendants

STATEMENT OF CLAIM

TO THE DEFENDANTS:

A LEGAL PROCEEDING HAS BEEN COMMENCED AGAINST YOU by the Plaintiff. The claim made against you is set out in the following pages.

IF YOU WISH TO DEFEND THIS PROCEEDING, you or a solicitor acting for you are required to prepare a statement of defence in Form 171B prescribed by the *Federal Court Rules*, serve it on the plaintiff's solicitor or, where the plaintiff do not have a solicitor, serve it on the plaintiff, and file it, with proof of service, at a local office of this Court, WITHIN 30 DAYS after this statement of claim is served on you, if you are served within Canada.

If you are served in the United States of America, the period for serving and filing your statement of defence is forty days. If you are served outside Canada and the United States of America, the period for serving and filing your statement of defence is sixty days.

Copies of the *Federal Court Rules*, information concerning the local offices of the Court and other necessary information may be obtained on request to the Administrator of this Court at Ottawa (telephone 613-992-4238) or at any local office.

IF YOU FAIL TO DEFEND THIS PROCEEDING, judgment may be given against you in your absence and without further notice to you.

September 13, 2007

Issued by: Stan Shepherd **STAN SHEPHERD
REGISTRY OFFICER
AGENT DU GREFFE**

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TO: Royal Bank of Canada
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M5J 2J5

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H3C 3A9

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Toronto-Dominion Bank
Toronto-Dominion Centre
66 Wellington Street W.
Toronto, Ontario
M5K 1A2

Canadian Imperial Bank of Commerce
Commerce Court
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Toronto, Ontario
M5L 1A2

Bank of Montreal
129 rue Saint Jacques,
Montreal, Quebec
H2Y 1L6

National Bank of Canada
National Bank Tower,
600 de la Cauchetiere West,
Montreal, Quebec

Symcor Inc.
1 Robert Speck Parkway
Suite 400
Mississauga, Ontario
L4Z 4E7

Intria Items Inc.
c/o CIBC Corporate Secretary's Division
199 Bay Street
Commerce Court West, 44th Floor
Toronto, Ontario
M5L 1A2

Intria Items Inc.
5705 Cancross Court,
Mississauga, Ontario
L5R 3E9

CLAIM

1. The plaintiff claims:
 - (i) a declaration that claims 1-93 of Canadian Patent No. 2,301,793 ("793 Patent") have been infringed, contrary to the *Patent Act* R.S.C. 1985, c.P-4 ("*Patent Act*"), by the defendants;
 - (ii) an interim, interlocutory and permanent injunction restraining the defendants, their directors, officers, employees, agents and all of those over whom they exercise control from:
 - i. manufacturing, distributing, offering for sale, selling, supplying or otherwise making available, or using in Canada any of the plaintiff's systems and processes for capturing, processing and storing images of financial instruments including, but not limited to, cheques; and
 - ii. inducing and procuring others to manufacture, distribute, offer for sale, sell, supply, make available or use in Canada systems and processes that fall within the scope of the asserted claims in the 793 Patent; and
 - iii. otherwise infringing any of the asserted 793 Patent claims;
 - (iii) an order for delivery up to the plaintiff of, or destruction of, all systems and processes that fall within the scope of the 793 Patent as may offend the injunction sought above;
 - (iv) damages for infringement suffered by the plaintiff in an amount in excess of \$50,000, as specified in Rule 182(b) of the *Federal Courts Rules*, exclusive of costs and interest, or an accounting of profits of the defendants, whichever the plaintiff may, after due inquiry and full discovery, elect;

- (v) punitive damages for the acts of the defendants;
- (vi) pre-judgment interest and post-judgment interest on all monetary relief at the rate of 2% above the prevailing Bank of Canada rates;
- (vii) reasonable compensation for damages sustained by the plaintiff as a result of the defendants' conduct pursuant to s.55(2) of the *Patent Act* accruing from the date the patent application that issued to the 793 Patent was laid open to public inspection;
- (viii) costs of and incidental to this action on a solicitor-client basis or such other basis as this Honourable Court may order, plus GST, and including all disbursements; and
- (ix) such further and other relief as to this Honourable Court it may deem just.

THE PARTIES

2. The plaintiff, DataTreasury Corporation ("DataTreasury"), is a Delaware corporation with its principal place of business at 2301 W. Plano Parkway, Suite 106, Plano, Texas, 75075, United States of America.

3. DataTreasury is the owner of Canadian Patent No. 2,301,793 entitled "Remote Image Capture with Centralized Processing and Storage" which issued on January 17, 2001 and expires on August 27, 2017.

4. As will be described more fully below, electronically capturing, transmitting (including securely in many aspects of the claimed invention), processing and storing images of financial instruments and other documents including, but not limited to, cheques falls within the scope of the 793 Patent.

5. The defendant, Royal Bank of Canada ("RBC"), is a chartered bank organized and existing under the provisions of the *Bank Act*, with its principal offices at Royal Bank

Plaza, 200 Bay Street, Toronto, Ontario and also at 1 Place Ville-Marie, Montreal, Quebec.

6. The defendant, Bank of Nova Scotia ("BNS"), is a chartered bank organized and existing under the provisions of the *Bank Act*, with its principal office at Bank of Nova Scotia Building, 1709 Hollis Street, Halifax, Nova Scotia.

7. The defendant, Toronto-Dominion Bank ("TD"), is a chartered bank organized and existing under the provisions of the *Bank Act*, with its principal office at the Toronto-Dominion Centre, Toronto, Ontario.

8. The defendant, Canadian Imperial Bank of Commerce ("CIBC"), is a chartered bank organized and existing under the provisions of the *Bank Act*, with its principal office at Commerce Court, Toronto, Ontario.

9. The defendant, Bank of Montreal ("BMO"), is a chartered bank organized and existing under the provisions of the *Bank Act*, with its principal office at 129 rue Saint Jacques, Montreal, Quebec.

10. The defendant, National Bank of Canada ("NBC"), is a chartered bank organized and existing under the provisions of the *Bank Act*, with its principal office at National Bank Tower, 600 de la Cauchetiere West, Montreal, Quebec.

11. RBC, BNS, TD, CIBC, BMO, and NBC ("Defendant Banks") offer and provide, by themselves and through their affiliates and agents, cheque, deposit, investment, loan, securities, trust, insurance and other banking related products and services across Canada and elsewhere.

12. The Defendant Banks provide products and services by which they electronically capture, transmit (including securely in many aspects of the claimed invention), process and store images of financial instruments and other documents including, but not limited to, cheques. Additionally, the Defendant Banks utilize the electronic capturing, transmission (including securely in many aspects of the claimed invention), processing and storing services of the defendants Symcor Inc. ("Symcor") and Intria Items Inc. ("Intria").

13. Symcor is a corporation incorporated under the laws of Canada with its principal office at 1 Robert Speck Parkway, Suite 400, Mississauga, Ontario. The shareholders of Symcor are RBC, TD and BMO. Symcor has partnered with Small Value Payments Company ("SVPCO"), an analogous financial institution owned US service provider, to establish system connectivity to allow for electronic exchange of cheque data and images between their client financial institutions in the US and Canada.

14. Intria is a corporation incorporated under the laws of Canada with its principal office at 5705 Cancross Court, Mississauga. The sole shareholder of Intria is CIBC.

BACKGROUND TO CLAIM

15. The present action relates to the field of technology involving electronically capturing, transmitting (including securely in many aspects of the claimed invention), processing and storing images of financial instruments and other documents including, but not limited to, cheques.

16. In the early 1990s financial institutions were required to physically process and transport each presented cheque to its original issuing bank. This process was labour-intensive, costly and took several days to complete.

17. Beginning in 1994, Claudio Ballard, the inventor of the 793 Patent, invented systems and processes that, among other things, could electronically capture, transmit (including securely in many aspects of the claimed invention), process and store images of financial instruments including, but not limited to, cheques, which would result in a significant time and costs savings to financial institutions. These systems and processes fall within the scope of the 793 Patent.

18. The defendants' activities fall within the scope of the 793 Patent, as detailed below. The defendants have not requested any licences related to the 793 Patent but instead have deliberately, willfully and knowingly infringed the 793 Patent.

19. This is in stark contrast to the many financial institutions and associated service providers that have sought and obtained licences from DataTreasury regarding the use of DataTreasury's technology as disclosed in the 793 Patent.

THE 793 PATENT

20. The 793 Patent, entitled "Remote Image Capture with Centralized Processing and Storage" was filed on August 26, 1998 as PCT No. 1998/017662 and claims priority from two US Patent applications: 08/917,761 (August 27, 1997) and 09/081,012 (May 19, 1998) which issued to US Patent Nos. 5,910,988 and 6,032,137, respectively. The 793 Patent was published as PCT Publication No. 1999/011021 on March 4, 1999, entered the Canadian National Phase on February 21, 2000 and issued on January 17, 2006. DataTreasury is the assignee of the 793 Patent.

21. US Patent Nos. 5,910,988 and 6,032,137, which combined are substantially identical to the 793 Patent, have been through extensive litigation and government scrutiny over approximately the past five years. These sister patents to the 793 Patent have both been twice recognized as valid and enforceable patents by the United States Patent & Trademark Office and additionally recognized on two separate occasions as valid and enforceable by not one, but two United State District Court Judges.

22. The 793 Patent issued under the signature of the Commissioner of Patents and the seal of the Patent Office and granted to DataTreasury, for a term of 20 years from the filing date, the exclusive right, privilege and liberty of making, constructing, using and selling to others to be used in Canada, the invention claimed in the 793 Patent. The 793 Patent has been since its date of issuance, and is now, in full force and effect.

23. The 793 Patent discloses, among other things, an architectural networking system for central management, storage and verification of remotely captured electronic and paper transactions from cheques, credit cards, smart cards, debit cards, documents and receipts involving sales, business, banking and general purpose consumer applications.

24. The defendants' activities in electronically capturing, transmitting (including securely in many aspects of the claimed invention), processing and storing images of financial instruments including, but not limited to, cheques employ systems and processes claimed in claims 1-93 of the 793 Patent as set out in Schedule "A" to this Statement of Claim. Independent claims 1, 26, 42, 46, 51, 76, 92 and 93 are set out in full below.

25. Claim 1 of the 793 Patent reads:

1. A system for central management, storage and report generation of remotely captured paper transactions from documents and receipts comprising:

one or more remote data access subsystems for capturing and sending paper transaction data and subsystem identification information comprising at least one imaging subsystem for capturing the documents and receipts and at least one data access controller for managing the capturing and sending of the transaction data;

at least one central data processing subsystem for processing, sending, verifying and storing the paper transaction data and the subsystem identification information comprising a management subsystem for managing the processing, sending and storing of the of the transaction data; and

at least one communication network for the transmission of the transaction data within and between said one or more data access subsystems and said at least one data processing subsystem, with the data access subsystem providing encrypted subsystem identification information and encrypted paper transaction data to the data processing subsystem.

26. Claim 26 of the 793 Patent reads:

26. A method for central management, storage and verification of remotely captured paper transactions from documents and receipts comprising the steps of:

capturing an image of the paper transaction data at one or more remote locations and sending a captured image of the paper transaction data;

managing the capturing and sending of the transaction data;

collecting, processing, sending and storing the transaction data at a central location;

managing the collecting, processing, sending and storing of the transaction data;

encrypting subsystem identification information and the transaction data;
and

transmitting the transaction data and the subsystem identification information within and between the remote location(s) and the central location.

27. Claim 42 of the 793 Patent reads:

42. A communication network for the transmission of data within and between one or more remote data processing subsystems, at least one intermediate data collecting subsystem and at least one central subsystem forming a tiered architecture wherein each of said at least one central data processing subsystem communicate with a corresponding some of said at least one data collecting subsystem and each of said at least one data collecting subsystem communicate with a corresponding some of said one or more data processing subsystems, said data processing subsystem including an imaging subsystem for capturing images of documents and receipts, comprising:

at least one first local area network for transmitting data within a corresponding one of said one or more remote subsystems;

at least one second local area network for transmitting data within a corresponding one of said at least one intermediate subsystem;

at least one third local area network for transmitting data within a corresponding one of said at least one central subsystem; and

at least one wide area network for transmitting data between said one or more remote subsystems, said at least one intermediate subsystem and said at least one central subsystem.

28. Claim 46 of the 793 Patent reads:

46. A method for transmitting data within and between one or more remote subsystems, at least one intermediate subsystem and at least one central subsystem in a tiered manner wherein each of the central subsystems communicate with at least one intermediate subsystem and each of the intermediate subsystems communicate with at least one remote subsystems comprising the steps of:

capturing an image of documents and receipts and extracting data therefrom;

transmitting data within the remote locations;

transmitting data from each remote location to corresponding intermediate location;

transmitting data within the intermediate locations;

transmitting data from each intermediate location to corresponding central locations; and

transmitting data within the central locations.

29. Claim 51 of the 793 Patent reads:

51. A system for central management, storage and report generation of remotely captured paper transactions from checks comprising:

one or more remote data access subsystems for capturing and sending paper transaction data including a payer bank's routing number, a payer bank's routing information, a payer's account number, a payer's check, a payer bank's draft, a check amount, a payee bank's identification number, a payee bank's routing information, and a payee's account number, and further including subsystem identification information comprising at least one imaging subsystem for capturing the checks and at least one data access controller for managing the capturing and sending of the transaction data;

at least one central data processing subsystem for processing, sending, verifying and storing the paper transaction data and the subsystem identification information comprising a data management subsystem for managing the processing, sending and storing of the transaction data; and

at least one communication network for the transmission of the transaction data within and between said one or more data access subsystems and said at least one data processing subsystem, with the data access subsystem providing encrypted subsystem identification information and encrypted paper transaction data to the data processing subsystem.

30. Claim 76 of the 793 Patent reads:

76. A method for central management, storage and verification of remotely captured paper transactions from checks comprising the steps of:

capturing an image of the paper transaction data at one or more remote locations said transaction data including a payer bank's identification

number, a payer bank's routing number, a payer bank's routing information, a payer's account number, a payer's check, a payer bank's draft, a check amount, a payee bank's identification number, a payee bank's routing information, and a payee's account number; and sending a captured image of the paper transaction data;
managing the capturing and sending of the transaction data;

collecting, processing, sending and storing the transaction data at a central location;

managing the collecting, processing, sending and storing of the transaction data;

encrypting subsystem identification information and they transaction data; and

transmitting the transaction data and the subsystem identification information within and between the remote location(s) and the central location.

31. Claim 92 of the 793 Patent reads:

92. A system for central management, storage and report generation of remotely captured paper transactions from checks comprising:

one or more remote data access subsystems for capturing and sending paper transaction data and verifying transaction data from the checks comprising at least one imaging subsystem for capturing the checks and at least one data access controller for managing the capturing and sending of the transaction data;

at least one central data processing subsystem for processing, sending, verifying and storing the paper transaction data and the subsystem identification information comprising a management subsystem for managing the processing, sending and storing of the of the transaction data; and

at least one communication network for the transmission of the transaction data within and between said one or more data access subsystems and said at least one data processing subsystem, with the data access subsystem providing encrypted subsystem identification information and encrypted paper transaction data to the data processing subsystem.

32. Claim 93 of the 793 Patent reads:

93. A method for central management, storage and verification of remotely captured paper transactions from checks comprising the steps of:

capturing an image of the check at one or more remote locations and sending a captured image of the check;

managing the capturing and sending of the transaction data;

collecting, processing, sending and storing the transaction data at a central location; managing the collecting, processing, sending and storing of the transaction data;

encrypting subsystem identification information and the transaction data;

verifying the transaction data from the check; and transmitting the transaction data and the subsystem identification information within and between the remote location(s) and the central location.

33. Printed copies of the 793 Patent will be served in accordance with Rule 206 of the *Federal Courts Rules*.

34. By electronically capturing, transmitting (including securely in many aspects of the claimed invention), processing, and storing images of financial instruments, including but not limited to cheques, the defendants have infringed, or induced or procured infringement by others, DataTreasury's rights claimed in claims 1-93 of the 793 Patent.

35. The defendants, at all material times, knew about DataTreasury's rights under the *Patent Act*, and specifically, DataTreasury's rights under ss. 55(1) and 55(2) of the *Patent Act*. Despite this knowledge, the defendants willfully and systematically infringed, or induced or procured the infringement of the 793 Patent as set out in this claim.

DAMAGES AND ACCOUNTING OF PROFITS

36. The precise number and dates of infringement, or inducement or procurement of infringement by others of the 793 Patent by the defendants are not specifically known to DataTreasury, but are known to the defendants. DataTreasury claims relief in respect of

all acts of infringement, direct or otherwise, and reasonable compensation by the defendants.

37. The defendants process billions of cheques per year using technology that falls within the scope of the 793 Patent.

38. In Canada, the Defendant Banks' infringing acts are facilitated primarily through their respective related companies, namely Symcor and Intria. Use of DataTreasury's patented technology represents savings of approximately 25% to in excess of 50% per cheque to the Defendant Banks compared to the cost associated with the manual processing of cheques.

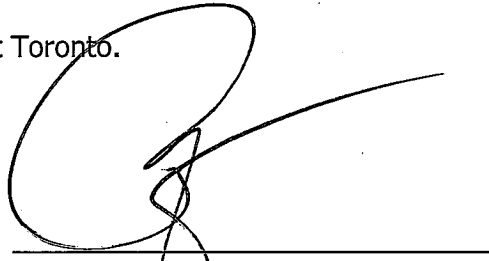
39. Since its inception, Symcor alone has processed over 10 billion cheques in Canada.

40. Intria processes approximately 2 billion items per year.

41. None of the defendants have either sought a licence from (or even attempted to communicate with) DataTreasury or otherwise attempted to compensate DataTreasury for their infringement, directly or by inducement, of the 793 Patent.

42. As a result of the defendants' systematic, deliberate and willful infringement, directly or otherwise, DataTreasury is entitled to damages or an accounting of profits at its election.

The plaintiff proposes that this action to be tried at Toronto.



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Solicitors for the Plaintiff
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Schedule "A"

Asserted Claims 1-93 of the 739 Patent

- 1.** A system for central management, storage and report generation of remotely captured paper transactions from documents and receipts comprising:

one or more remote data access subsystems for capturing and sending paper transaction data and subsystem identification information comprising at least one imaging subsystem for capturing the documents and receipts and at least one data access controller for managing the capturing and sending of the transaction data;

at least one central data processing subsystem for processing, sending, verifying and storing the paper transaction data and the subsystem identification information comprising a management subsystem for managing the processing, sending and storing of the of the transaction data; and

at least one communication network for the transmission of the transaction data within and between said one or more data access subsystems and said at least one data processing subsystem, with the data access subsystem providing encrypted subsystem identification information and encrypted paper transaction data to the data processing subsystem.

- 2.** A system as in claim 1 wherein said one or more data access subsystems further comprise at least one scanner for capturing the paper transaction data.

- 3.** A system as in claim 2 wherein said one or more data access subsystems also capture electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, further comprising:

at least one card interface for capturing the electronic transaction data;

at least one signature interface for capturing an electronic signature; and

at least one biometric interface for capturing biometric data.

- 4.** A system as in claim 3 wherein said at least one data access controller successively transforms the captured transaction data to a bitmap image, a compressed bitmap image, an encrypted, compressed bitmap image and an encrypted, compressed bitmap image tagged with information identifying a location and time of the transaction data capture.

- 5.** A system as in claim 4 wherein said one or more data access subsystems further comprise digital storage for storing the tagged, encrypted, compressed bitmap image.

6. A system as in claim 5 wherein said at least one card interface initiates the electronic transaction.

7. A system as in claim 6 wherein said one or more data access subsystems further comprise at least one printer for printing the paper transaction initiated by said at least one card interface.

8. A system as in claim 7 wherein the paper transaction printed by said at least one printer includes data glyphs.

9. A system as in claim 1 wherein said data management subsystem of said at least one data processing subsystem comprises:

at least one server for polling said one or more remote data access subsystems for transaction data;

a database subsystem for storing the transaction data in a useful form;

a report generator for generating reports from the transaction data and providing data to software applications;

at least one central processing unit for managing the storing of the transaction data;

a domain name services program for dynamically assigning one of said at least one server to receive portions of the transaction data for balancing the transaction data among said at least one server; and

a memory hierarchy.

10. A system as in claim 9 wherein said at least one server also polls for biometric and signature data, said database stores the biometric data and the signature data, and said at least one central processing unit verifies the biometric data and the signature data.

11. A system as in claim 9 wherein said memory hierarchy comprises at least one primary memory for storage of recently accessed transaction data and at least one secondary memory for storage of other transaction data.

12. A system as in claim 11 wherein said at least one secondary memory comprises at least one write once read many jukebox and at least one optical storage jukebox.

13. A system as in claim 12 wherein said at least one optical storage jukebox comprises read only memory technology including compact disc read only memory form factor metallic write once read many disc.

14. A system as in claim 9 wherein said database subsystem comprises at least one

predefined template for partitioning the stored transaction data into panels and identifying locations of the panels.

15. A system as in claim 14 wherein said data processing subsystem further comprises a date entry gateway for correcting errors in the panels of stored transaction data.

16. A system as in claim 1 wherein said at least one communication network comprises:

at least one first local area network for transmitting data within a corresponding one of said one or more remote data access subsystems;

at least one second local area network for transmitting data within a corresponding one of said at least one data processing subsystem; and

at least one wide area network for transmitting data between said one or more remote data access subsystems and said at least one data processing subsystem.

17. A system as in claim 16 wherein said at least one communication network further comprises:

at least one modem for connecting said at least one first local area network of said one or more data access subsystems to a corresponding one of said at least one second local area network of said at least one data processing subsystem through said at least one wide area network; and

at least one bank of modems for connecting said at least one second local area network of said at least one data processing subsystem to a corresponding some of said at least one first local area network of said one or more data access subsystems through said at least one wide area network.

18. A system as in claim 1 further comprising at least one data collecting subsystem for collecting and sending the electronic or paper transaction data comprising a further management subsystem for managing the collecting and sending of the transaction data.

19. A system as in claim 18 wherein said further data management subsystem of said at least one data collecting subsystem comprises:

at least one server for polling said one or more remote data access subsystems for transaction data;

a database for storing the transaction data in a useful form;

at least one central processing unit for managing the collecting of the transaction date;

a domain name services program for dynamically assigning one of said at least one server to receive portions of the transaction data for balancing the transaction data among said at least one server; and

a memory hierarchy.

20. A system as in claim 19 wherein said memory hierarchy comprises at least one primary memory for collecting transaction data and at least one secondary memory for backup storage of the transaction data.

21. A system as in claim 20 wherein said at least one secondary memory comprises at least one DLT jukebox.

22. A system as in claim 18 wherein said at least one communication network comprises:

at least one first local area network for transmitting data within a corresponding one of said one or more remote data access subsystems;

at least one second local area network for transmitting data within a corresponding one of said at least one data collection subsystem;

at least one third local area network for transmitting data within a corresponding one of said at least one data processing subsystem; and

at least one wide area network for transmitting data between said one or more remote data access subsystems, said at least one data collection subsystem and said at least one data processing subsystem.

23. A system as in claim 22 wherein said at least one communication network further comprises:

at least one first modem for connecting said at least one first local area network of said one or more data access subsystems to a corresponding one of said at least one second local area network through said at least one wide area network;

at least one bank of modems for connecting said at least one second local area network of said at least one data collection subsystem to a corresponding some of said at least one first local area network of said one or more data access subsystems through said at least one wide area network;

at least one first wide area network router for connecting a corresponding one of said at least one second local area network of said at least one data collecting subsystem to said at least one wide area network; and

at least one second wide area network router for connecting a corresponding one of said at least one third local area network of said at least one data processing subsystem to said at least one wide area network.

24. A system as in claim 23 wherein said at least one first wide area network and said at least one second wide area network comprises a carrier cloud, said carrier cloud using a frame relay method for transmitting the transaction data.

25. A system as in claim 22 wherein said at least one second local area network and said at least one third local area network further comprises a corresponding one of at least one network switch for routing transaction data within said at least one second local area network and said at least one third local area network.

26. A method for central management, storage and verification of remotely captured paper transactions from documents and receipts comprising the steps of:

capturing an image of the paper transaction data at one or more remote locations and sending a captured image of the paper transaction data;

managing the capturing and sending of the transaction data;

collecting, processing, sending and storing the transaction data at a central location;

managing the collecting, processing, sending and storing of the transaction data;

encrypting subsystem identification information and the transaction data; and

transmitting the transaction data and the subsystem identification information within and between the remote location(s) and the central location.

27. The method as in claim 26 wherein said managing the capturing and sending step comprises the steps of:

successively transforming the captured transaction data to a bitmap image, a compressed bitmap image, an encrypted, compressed bitmap image and an encrypted, compressed bitmap image tagged with information identifying a location and time of the transaction data capturing; and

storing the tagged, encrypted, compressed bitmap image.

28. The method as in claim 27 wherein said managing the capturing and sending step also captures electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, further comprising the steps of:

initiating an electronic transaction;

capturing signature data;

capturing biometric data; and

printing a paper transaction with data glyphs for the initiated electronic transaction.

29. A method as in claim 26 wherein:

said capturing and sending step occurs at a plurality of remote locations; and

said collecting, processing, sending and storing step occurs at a plurality of central locations.

30. A method as in claim 29 wherein said collecting, processing, sending and storing step comprises the steps of:

polling the remote locations for transaction data with servers at the central locations;

storing the transaction data at the central location in a memory hierarchy, said storing maintains recently accessed transaction data in a primary memory and other transaction data in a secondary memory; and

dynamically assigning the servers at the central location to receive portions of the transaction data for balancing the transaction data among the servers; and

generating reports from the transaction data and providing data to software applications.

31. A method as in claim 30 wherein said storing the transaction data step comprises the steps of:

partitioning the stored transaction data with predefined templates into panels; and

identifying locations of the panels.

32. A method as in claim 31 wherein said managing the collecting, processing, sending and storing of the transaction data step comprises correcting errors in the panels of stored transaction data.

33. A method as in claim 32 further comprising the steps of:

polling the remote locations for captured electronic data, captured signature data and captured biometric data with servers at the central locations; and

comparing the captured signature data and the captured biometric data to stored signature data and stored biometric data respectively for identification verification.

34. A method as in claim 32 wherein said transmitting the transaction data step comprises the steps of:

transmitting data within the remote locations;

transmitting data from each remote location to a corresponding central location;
and

transmitting data within the central locations.

35. A method as in claim 34 wherein said transmitting data from each remote location to a corresponding central location step comprises the steps of:

connecting each remote location to a corresponding central location; and

connecting each central location to corresponding remote locations.

36. A method as in claim 29 further comprising the steps of:

collecting and sending the electronic or paper transaction data at intermediate locations;

managing the collecting and sending of the transaction data; and

transmitting the transaction data within the intermediate location and between the intermediate locations and the remote locations and the central locations.

37. A method as in claim 36 wherein said managing the collecting and sending step comprises the steps of:

polling the remote locations for transaction data with servers in the intermediate locations;

storing the transaction data in the intermediate locations in a useful form, said storing maintains the transaction data in a primary memory of a memory hierarchy and performs backup storage of the transaction data into a secondary memory of the memory hierarchy; and

dynamically assigning the servers to receive portions of the transaction data for balancing the transaction data among the servers.

38. The method as in claim 36 wherein said transmitting the transaction data step comprises the steps of:

transmitting data within the remote locations;

transmitting data from each remote location to a corresponding intermediate location;

transmitting data within the intermediate locations;

transmitting data from each intermediate location to corresponding central locations; and

transmitting data within the central locations.

39. A method as in claim 38 wherein said transmitting data from each remote location to corresponding intermediate locations step comprises the steps of:

connecting each remote location to a corresponding intermediate location; and

connecting the intermediate locations to corresponding remote locations.

40. A method as in claim 38 wherein said transmitting data from each intermediate location to corresponding central locations comprises the steps of:

connecting each intermediate location to an external communication network; and

connecting the corresponding central locations to the communication network.

41. A method as in claim 40 wherein said transmitting data from each intermediate location to corresponding central locations step further comprises the steps of:

packaging the transaction data into frames; and

transmitting the frames through the external communication network.

42. A communication network for the transmission of data within and between one or more remote data processing subsystems, at least one intermediate data collecting subsystem and at least one central subsystem forming a tiered architecture wherein each of said at least one central data processing subsystem communicate with a corresponding some of said at least one data collecting subsystem and each of said at least one data collecting subsystem communicate with a corresponding some of said one or more data processing subsystems, said data processing subsystem including an imaging subsystem for capturing images of documents and receipts, comprising:

at least one first local area network for transmitting data within a corresponding one of said one or more remote subsystems;

at least one second local area network for transmitting data within a corresponding one of said at least one intermediate subsystem;

at least one third local area network for transmitting data within a corresponding one of said at least one central subsystem; and

at least one wide area network for transmitting data between said one or more remote subsystems, said at least one intermediate subsystem and said at least one central subsystem.

43. A communication network as in claim 42 further comprising:

at least one first modem for connecting said at least one first local area network of said one or more remote subsystems to a corresponding one of said at least one second local area network through said at least one wide area network;

at least one bank of modems for connecting said at least one second local area network of said at least one intermediate subsystem to a corresponding some of said at least one first local area network of said one or more remote subsystems through said at least one wide area network;

at least one first wide area network router for connecting a corresponding one of said at least one second local area network of said at least one intermediate subsystem to said at least one wide area network; and

at least one second wide area network router for connecting a corresponding one of said at least one third local area network of said at least one central subsystem to said at least one wide area network.

44. A communication network as in claim 43 wherein said at least one first wide area network and said at least one second wide area network comprises a carrier cloud which utilizes a frame relay method for transmitting the transaction data.

45. A communication network as in claim 44 wherein said at least one second local area network and said at least one third local area network further comprises a corresponding one of at least one network switch for routing transaction data within said at least one second local area network and said at least one third local area network; and further wherein said data comprises (a) electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, or (b) paper transactions from documents and receipts.

46. A method for transmitting data within and between one or more remote subsystems, at least one intermediate subsystem and at least one central subsystem in a tiered manner wherein each of the central subsystems communicate with at least one intermediate subsystem and each of the intermediate subsystems communicate with at least one remote subsystems comprising the steps of:

capturing an image of documents and receipts and extracting data therefrom;

transmitting data within the remote locations;

transmitting data from each remote location to corresponding intermediate location;

transmitting data within the intermediate locations;

transmitting data from each intermediate location to corresponding central locations; and

transmitting data within the central locations.

47. A method as in claim 46 wherein said transmitting data from each remote location to corresponding intermediate locations step comprises the steps of:

connecting each remote location to a corresponding intermediate location; and

connecting the intermediate locations to corresponding remote locations.

48. A method as in claim 47 wherein said transmitting data from each intermediate location to corresponding central locations comprises the steps of:

connecting each intermediate location to an external communication network;
and

connecting the corresponding central locations to the external communication network.

49. A method as in claim 48 wherein said transmitting data from each intermediate location to corresponding central locations step further comprises the steps of:

packaging the transaction data into frames; and

transmitting the frames through the external communication network.

50. A method as in claim 46 wherein said data is obtained from (a) electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, or (b) paper transactions from documents and receipts.

51. A system for central management, storage and report generation of remotely captured paper transactions from checks comprising:

one or more remote data access subsystems for capturing and sending paper transaction data including a payer bank's routing number, a payer bank's routing information, a payer's account number, a payer's check, a payer bank's draft, a check amount, a payee bank's identification number, a payee bank's routing information, and a payee's account number, and further including subsystem identification information comprising at least one imaging subsystem for capturing the checks and at least one data access controller for managing the capturing and sending of the transaction data;

at least one central data processing subsystem for processing, sending, verifying and storing the paper transaction data and the subsystem identification information comprising a data management subsystem for managing the processing, sending and storing of the transaction data; and

at least one communication network for the transmission of the transaction data within and between said one or more data access subsystems and said at least one data processing subsystem, with the data access subsystem providing encrypted subsystem identification information and encrypted paper transaction data to the data processing subsystem.

52. A system as in claim 51 wherein said one or more data access subsystems further comprise at least one scanner for capturing the paper transaction data.

53. A system as in claim 52 wherein said one or more data access subsystems also capture electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, further comprising:

at least one card interface for capturing the electronic transaction data;

at least one signature interface for capturing an electronic signature; and

at least one biometric interface for capturing biometric data.

54. A system as in claim 53 wherein said at least one data access controller successively transforms the captured transaction data to a bitmap image, a compressed bitmap image, an encrypted, compressed bitmap image and an encrypted, compressed bitmap image tagged with information identifying a location and time of the transaction data capture.

55. A system as in claim 54 wherein said one or more data access subsystems further comprise digital storage for storing the tagged, encrypted, compressed bitmap image.

56. A system as in claim 55 wherein said at least one card interface initiates the electronic transaction.

57. A system as in claim 56 wherein said one or more data access subsystems further comprise at least one printer for printing the paper transaction initiated by said at least one card interface.

58. A system as in claim 57 wherein the paper transaction printed by said at least one printer includes data glyphs.

59. A system as in claim 51 wherein said data management subsystem of said at least one data processing subsystem comprises:

at least one server for polling said one or more remote data access subsystems for transaction data;

a database subsystem for storing the transaction data in a useful form;

a report generator for generating reports from the transaction data and providing data to software applications;

at least one central processing unit for managing the storing of the transaction data;

a domain name services program for dynamically assigning one of said at least one server to receive portions of the transaction data for balancing the transaction data among said at least one server; and

a memory hierarchy.

60. A system as in claim 59 wherein said at least one server also polls for biometric and signature data, said database stores the biometric data and the signature data, and said at least one central processing unit verifies the biometric data and the signature data.

61. A system as in claim 59 wherein said memory hierarchy comprises at least one primary memory for storage of recently accessed transaction data and at least one secondary memory for storage of other transaction data.

62. A system as in claim 61 wherein said at least one secondary memory comprises at least one write once read many jukebox and at least one optical storage jukebox.

63. A system as in claim 62 wherein said at least one optical storage jukebox comprises read only memory technology including compact disc read only memory form factor metallic write once read many disc.

64. A system as in claim 59 wherein said database subsystem comprises at least one predefined template for partitioning the stored transaction data into panels and identifying locations of the panels.

65. A system as in claim 64 wherein said data processing subsystem further comprises a data entry gateway for correcting errors in the panels of stored transaction data.

66. A system as in claim 51 wherein said at least one communication network comprises:

at least one first local area network for transmitting data within a corresponding one of said one or more remote data access subsystems;

at least one second local area network for transmitting data within a corresponding one of said at least one data processing subsystem; and

at least one wide area network for transmitting data between said one or more remote data access subsystems and said at least one data processing subsystem.

67. A system as in claim 66 wherein said at least one communication network further comprises:

at least one modem for connecting said at least one first local area network of said one or more data access subsystems to a corresponding one of said at least one second local area network of said at least one data processing subsystem through said at least one wide area network; and

at least one bank of modems for connecting said at least one second local area network of said at least one data processing subsystem to a corresponding some of said at least one first local area network of said one or more data access subsystems through said at least one wide area network.

68. A system as in claim 51 further comprising at least one data collecting subsystem for collecting and sending the electronic or paper transaction data comprising a further management subsystem for managing the collecting and sending of the transaction data.

69. A system as in claim 68 wherein said further data management subsystem of said at least one data collecting subsystem comprises:

at least one server for polling said one or more remote data access subsystems for transaction data;

a database for storing the transaction data in a useful form;

at least one central processing unit for managing the collecting of the transaction data; a domain name services program for dynamically assigning one of said at least one server to receive portions of the transaction data for balancing the transaction data among said at least one server; and

a memory hierarchy.

70. A system as in claim 69 wherein said memory hierarchy comprises at least one primary memory for collecting transaction data and at least one secondary memory for backup storage of the transaction data.

71. A system as in claim 70 wherein said at least one secondary memory comprises at least one DLT jukebox.

72. A system as in claim 68 wherein said at least one communication network comprises:

at least one first local area network for transmitting data within a corresponding one of said one or more remote data access subsystems;

at least one second local area network for transmitting data within a corresponding one of said at least one data collection subsystem;

at least one third local area network for transmitting data within a corresponding one of said at least one data processing subsystem; and

at least one wide area network for transmitting data between said one or more remote data access subsystems, said at least one data collection subsystem and said at least one data processing subsystem.

73. A system as in claim 72 wherein said at least one communication network further comprises:

at least one first modem for connecting said at least one first local area network of said one or more data access subsystems to a corresponding one of said at least one second local area network through said at least one wide area network;

at least one bank of modems for connecting said at least one second local area network of said at least one data collection subsystem to a corresponding one of said at least one first local area network of said one or more data access subsystems through said at least one wide area network;

at least one first wide area network router for connecting a corresponding one of said at least one second local area network of said at least one data collecting subsystem to said at least one wide area network; and

at least one second wide area network router for connecting a corresponding one of said at least one third local area network of said at least one data processing subsystem to said at least one wide area network.

74. A system as in claim 73 wherein said at least one first wide area network and said at least one second wide area network comprises a carrier cloud, said carrier cloud using a frame relay method for transmitting the transaction data.

75. A system as in claim 72 wherein said at least one second local area network and said at least one third local area network further comprises a corresponding one of at least one network switch for routing transaction data within said at least one second local area network and said at least one third local area network.

76. A method for central management, storage and verification of remotely captured paper transactions from checks comprising the steps of:

capturing an image of the paper transaction data at one or more remote locations said transaction data including a payer bank's identification number, a

payer bank's routing number, a payer bank's routing information, a payer's account number, a payer's check, a payer bank's draft, a check amount, a payee bank's identification number, a payee bank's routing information, and a payee's account number; and sending a captured image of the paper transaction data; managing the capturing and sending of the transaction data;

collecting, processing, sending and storing the transaction data at a central location;

managing the collecting, processing, sending and storing of the transaction data;

encrypting subsystem identification information and they transaction data; and

transmitting the transaction data and the subsystem identification information within and between the remote location(s) and the central location.

77. The method as in claim 76 wherein said managing the capturing and sending step comprises the steps of:

successively transforming the captured transaction data to a bitmap image, a compressed bitmap image, an encrypted, compressed bitmap image and an encrypted, compressed bitmap image tagged with information identifying a location and time of the transaction data capturing; and

storing the tagged, encrypted, compressed bitmap image.

78. The method as in claim 77 wherein said managing the capturing and sending step also captures electronic transactions from credit cards, smart cards and debit cards, signature data or biometric data, further comprising the steps of:

initiating an electronic transaction;

capturing signature data;

capturing biometric data; and

printing a paper transaction with data glyphs for the initiated electronic transaction.

79. A method as in claim 76 wherein:

said capturing and sending step occurs at a plurality of remote locations; and

said collecting, processing, sending and storing step occurs at a plurality of central locations.

80. A method as in claim 79 wherein said collecting, processing, sending and storing step comprises the steps of:

polling the remote locations for transaction data with servers at the central locations;

storing the transaction data at the central location in a memory hierarchy, said storing maintains recently accessed transaction data in a primary memory and other transaction data in a secondary memory; and

dynamically assigning the servers at the central location to receive portions of the transaction data for balancing the transaction data among the server; and

generating reports from the transaction data and providing data to software applications.

81. A method as in claim 80 wherein said storing the transaction data step comprises the steps of:

partitioning the stored transaction data with predefined templates into panels;
and

identifying locations of the panels.

82. A method as in claim 81 wherein said managing the collecting, processing, sending and storing of the transaction data step comprises correcting errors in the panels of stored transaction data.

83. A method as in claim 82 further comprising the steps of:

polling the remote locations for captured electronic data, captured signature data and captured biometric data with servers at the central locations; and

comparing the captured signature data and the captured biometric data to stored signature data and stored biometric data respectively for identification verification.

84. A method as in claim 82 wherein said transmitting the transaction data step comprises the steps of:

transmitting data within the remote locations;

transmitting data from each remote location to a corresponding central location;
and

transmitting data within the central locations.

85. A method as in claim 84 wherein said transmitting data from each remote location to a corresponding central location step comprises the steps of:

connecting each remote location to a corresponding central location; and

connecting each central location to corresponding remote locations.

86. A method as in claim 79 further comprising the steps of:

collecting and sending the electronic or paper transaction data at intermediate locations; managing the collecting and sending of the transaction data; and

transmitting the transaction data within the intermediate location and between the intermediate locations and the remote locations and the central locations.

87. A method as in claim 86 wherein said managing the collecting and sending step comprises the steps of:

polling the remote locations for transaction data with servers in the intermediate locations;

storing the transaction data in the intermediate locations in a useful form, said storing maintains the transaction data in a primary memory of a memory hierarchy and performs backup storage of the transaction data into a secondary memory of the memory hierarchy; and

dynamically assigning the servers to receive portions of the transaction data for balancing the transaction data among the servers.

88. The method as in claim 86 wherein said transmitting the transaction data step comprises the steps of:

transmitting data within the remote locations;

transmitting data from each remote location to a corresponding intermediate location;

transmitting data within the intermediate locations;

transmitting data from each intermediate location to corresponding central locations; and

transmitting data within the central locations.

89. A method as in claim 88 wherein said transmitting data from each remote location to corresponding intermediate locations step comprises the steps of:

connecting each remote location to a corresponding intermediate location; and

connecting the intermediate locations to corresponding remote locations.

90. A method as in claim 88 wherein said transmitting data from each intermediate location to corresponding central locations comprises the steps of:

connecting each intermediate location to an external communication network;
and

connecting the corresponding central locations to the communication network.

91. A method as in claim 90 wherein said transmitting data from each intermediate location to corresponding central locations step further comprises the steps of:

packaging the transaction data into frames; and

transmitting the frames through the external communication network.

92. A system for central management, storage and report generation of remotely captured paper transactions from checks comprising:

one or more remote data access subsystems for capturing and sending paper transaction data and verifying transaction data from the checks comprising at least one imaging subsystem for capturing the checks and at least one data access controller for managing the capturing and sending of the transaction data;

at least one central data processing subsystem for processing, sending, verifying and storing the paper transaction data and the subsystem identification information comprising a management subsystem for managing the processing, sending and storing of the of the transaction data; and

at least one communication network for the transmission of the transaction data within and between said one or more data access subsystems and said at least one data processing subsystem, with the data access subsystem providing encrypted subsystem identification information and encrypted paper transaction data to the data processing subsystem.

93. A method for central management, storage and verification of remotely captured paper transactions from checks comprising the steps of:

capturing an image of the check at one or more remote locations and sending a captured image of the check;

managing the capturing and sending of the transaction data;

collecting, processing, sending and storing the transaction data at a central location; managing the collecting, processing, sending and storing of the transaction data;

encrypting subsystem identification information and the transaction data;

verifying the transaction data from the check; and transmitting the transaction data and the subsystem identification information within and between the remote location(s) and the central location.

FEDERAL COURT

BETWEEN:

DATATREASURY CORPORATION

- Plaintiff -

- and -

**ROYAL BANK OF CANADA; BANK OF
NOVA SCOTIA; TORONTO-DOMINION
BANK; CANADIAN IMPERIAL BANK OF
CANADA; BANK OF MONTREAL;
NATIONAL BANK OF CANADA;
SYMCOR INC. and INTRIA ITEMS INC.**

- Defendants

STATEMENT OF CLAIM

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