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EXHIBIT 1

United States Patent [19]

Barnhard, Jr. et al.

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11] Patent Number:

5,265,007

1451 Date of Patent:

Nov. 23, 1993

ĮS	4]	CENTRAL CHECK CLEARING SYSTEM	
[7	5]	Inventors:	John L. Barnhard, Jr., Worthington; Thomas K. Bowen, Westerville; Terry L. Geer, Baltimore; John W. Liebersbach, Gahanna, all of Ohio
[7	3]	Assignee:	Huntington Bancshares Incorporated, Columbus, Ohio
[2	21]	Appl. No.:	390,623
[2	[2]	Filed:	Aug. 7, 1989

Related U.S. Application Data

[63]	Continuation-in-part of Ser. No. 203,489, Jun. 7, 1988, abandoned.
[51]	Int. Cl.5

[52]	U.S. Cl	
		364/406, 408; 902/24,
		902/39, 40; 235/379

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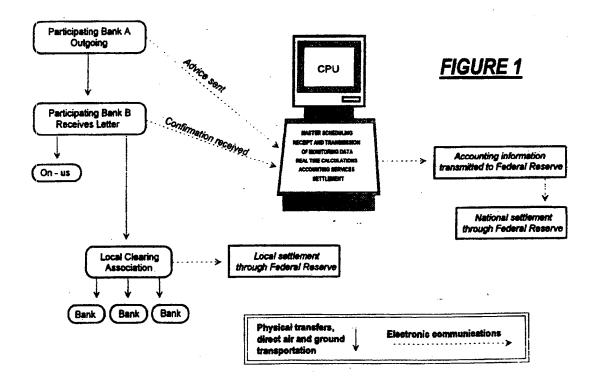
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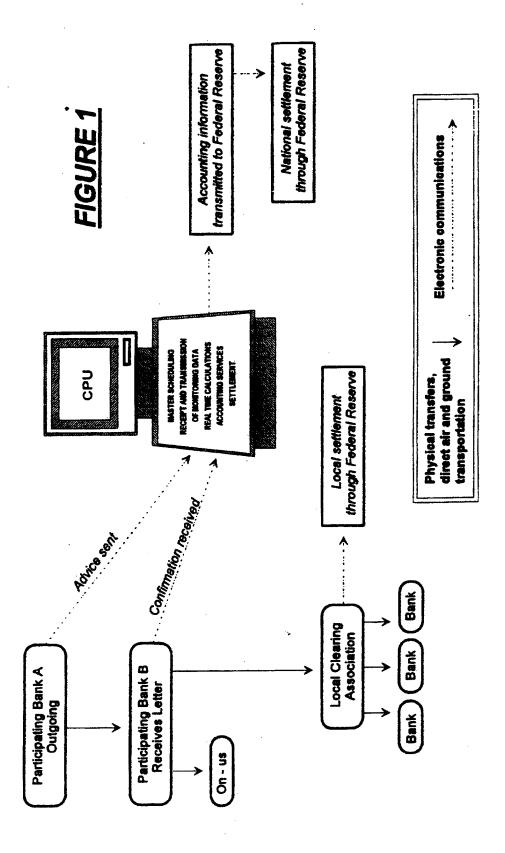
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Arthur

[57] ABSTRACT

A central check clearing association by which different member banks and financial institutions can each settle debit and credit balances with respect to other member institutions on a predetermined periodic basis and methods and systems by which the association is operable. The system and method is independent of conventional central bank district geographic and institutional boundaries and time zones.

6 Claims, 1 Drawing Sheet





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CENTRAL CHECK CLEARING SYSTEM

RELATED APPLICATION

This is a continuation-in-part of our copending application Ser. No. 07/203,489 filed on Jun. 7, 1988, now abandoned.

FIELD OF THE INVENTION

This invention relates to an exchange and settlement 10 system to be used by banks for financial instrument clearings. More particularly, the invention comprises a central check clearing association and a control system therefor by which different member banks and financial institutions can each settle by debit and credit entries for checks drawn on other member institutions and certain non-member institutions on a predetermined periodic basis and means by which the association and the control system for the association is operable. The system and method is independent of conventional central bank 20 district geographic and institutional boundaries, and time zones. In the system, checks can also be sent to members for clearing on behalf of non-member correspondent banks. As used herein, "checks" includes standard banking checks and other "cash items" as that 25 latter term is conventionally used in the banking industry.

BACKGROUND OF THE PRIOR ART

Check clearing systems are well known in the bank- 30 ing industry and generally operate locally or through the Federal Reserve Bank settlement system. On a predetermined periodic basis, checks and other financial instruments drawn against a payer bank are submitted for payment and collection. Where, in a system, there 35 are multiple institutions on which checks are drawn and which checks are in the possession of multiple members, clearinghouse systems are known in which the debit/credit balances of members with respect to the others are reconciled on a daily basis and payments to recon- 40 cile a net zero balance are made.

OBJECTS OF THE INVENTION

It is an object of this invention to provide means whereby an association composed of participating 45 banks in major cities is formed, and a national clearinghouse system is maintained. At least one institutional participant in each city would have access to the local clearinghouse. Participating member banks would each agree to receive items drawn on the individual partici- 50 pant and on other members of its local clearinghouse in that city. The members of the local clearinghouse need not be members of the national clearinghouse, and items cleared by the national association include items drawn on local clearinghouse members who do not belong to 55 the national association. As used herein, reference to "national clearinghouse" may also include a system having participants in different nations joined in a single association according to the system described herein. A uniformity in a single nation is most feasible.

In its function, the association would provide a central accounting means such as a conventional programmable computer or other central processing unit for the computation of the settlements among participating 65 banks. Physical delivery of items would be accomplished through air and ground transportation, and real time electronic tracking of cash letters transmitted

through the transportation system is permitted. Advice of the sending of cash letters would be received electronically by the association's central accounting means from the participating institutions sending such cash letters, and confirmations of receipt would also be electronically transmitted by participants receiving such cash letters. Preferably, the electronic information transmitted through the system would be encrypted.

The detailed accounting entries required to accomplish a net settlement among participants on a periodic basis (typically daily) would be prepared by the central accounting means of the association. In the United States banking system, national settlement would be completed by debit and credit of the participant's accounts, or wire advice to the participant's accounts through the Federal Reserve settlement system.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows an overall flow chart of operations in a national clearing association in the United States which includes: (1) the centralized monitoring and control means necessary for the association operations; and (2) the linkages of the various elements of the system by physical transfer and electronic communications.

DESCRIPTION OF THE PREFERRED **EMBODIMENT**

In its preferred embodiment applicable to the United States banking system, this invention comprises a centralized clearinghouse system including an association of selected member financial institutions. A clearing system is maintained by a central control means in which debits and credits owing from one member to another are calculated on a predetermined periodic basis without regard to Federal Reserve System district settlements, in which the participants report the value and transit status of items to be cleared to the central control means; and in which the central control means monitors on a real time basis the actual sending and receipt of, and the dollar amount of items being cleared, as reported by the participants, and records the sending and receipt of the aggregate amount of the actual financial instruments transported, as reported by the participants, (subject to timely reporting of adjustments, returns and the like) and thereafter calculates the net settlements among the participants and initiates the corresponding debits and credits necessary to effect settlement among members in the Federal Reserve settlement systems. In the system, before the calculation of the net settlement, the receiving bank records and enters into the central control means any adjustments and any return items after transmission of the items which may affect the net settlement.

In the system of the invention, physical transport of financial instruments between and among the members is controlled by a predetermined time schedule, and the national settlement of the individual members of the association is achieved at a time not later than local "national" association, however, because of currency 60 settlements by members of the national association are completed.

Organization of the system requires strict maintenance of predetermined association parameters. The clearinghouse is independent of conventional geographical and institutional boundaries such as Federal Reserve districts, as well as time zones. In the association, all participants must be members of the national clearinghouse association, and all member banks must agree Document 535

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to accept and process items drawn on themselves and on banks within the local clearinghouse of which they are also a member. The local clearinghouse rules, means of exchange and procedures are entirely separate from that of the system. All member banks of the national 5 association must agree to use the central settlement system, and all settlements would be either same day settlements or based on some other acceptable periodic or predetermined time schedule. In the United States the national association described herein would preferably occur after the daily scheduled local clearinghouse settlements are accomplished. Strict adherence to a time schedule prescribed by the association for providing debit and credit advice and the physical exchange of 15 items is required.

A high dollar return notification (i.e., \$2,500.00) is mandatory, as is high dollar adjustment notification. All cash letters received must be confirmed by the receiving bank through the association's accounting system. 20 Members typically should be able to guarantee minimum dollar amounts and transaction volumes to be able to participate in the association's clearinghouse system. Selection criteria for members may consider geographic locations, time zones, commercial standing and mem- 25 bership in other banking associations, as well as other criteria appropriate for a coordinated clearinghouse

In a central accounting means, all national settlements among participants in the national associations will be 30 posted from the association's accounting system to the accounts of the participants at the Federal Reserve System (or a pass-through bank). The net of the day's activity for each institution will reflect the bank's position in the system with respect to other members. By 35 means of the central accounting system, each member will be able electronically to inquire into the accounting system throughout the day, on a real time basis, to manage and reconcile funds in anticipation of settlement. In accordance with a strictly defined time schedule, all 40 clearinghouses. activity must be confirmed by the receiving bank prior to final settlement. If a member or members cannot settle, an unwinding mechanism is provided by a control means in the accounting system; and the system of the items sent to the non-settling member or members. The national clearinghouse association does not itself effect settlement among the members; member settlement occurs through the Federal Reserve System based on computations made by the control means 50 which are transmitted to one of the Federal Reserve Banks. That one Federal Reserve Bank, in turn, will send entries to other Federal Reserve Banks to effect "nationwide" settlements in other districts.

proposed clearinghouse association is to expedite the forward collection of items and the return of items. When forward collection is expedited, float is reduced, the speed of availability of funds is increased and costs are reduced.

Another advantage is the overall adoption of a uniform set of standards among members to cover all legal and operational aspects of the system. By agreeing to be governed by the association's bylaws, many existing and greater operational efficiencies achieved as a result. Further, the proposed clearinghouse association will reduce overall risks in the payment system by reducing the risks associated with daylight overdrafts and by minimizing the disruption to the overall system which would result if a member cannot settle.

The status of participant's accounts in the national clearinghouse association is recorded and displayed instantaneously as soon as information is received by the central control means. Account reconcilement occurs at a predetermined time each day when the net settlement is calculated after each member completes its Federal Reserve System, settlements accomplished by 10 reports. However, with reference to the sequence depicted in FIG. 1 in the United States system, the critical timing element of the system is that national settlement through the Federal Reserve System occurs not later than the settlements of local clearinghouses.

FIG. 1 shows an illustrative linkage of participants in the clearinghouse as presentation and payment functions are connected by physical transfer by air or ground transportation of the actual checks or drafts that are to be cleared and by electronic communications between the participants, concerning information about the value and status of transport of the items sent by member banks. In the example of FIG. 1, the relative position of participating banks A and B with respect to each other are monitored by the central control means of the National Clearing Association. Bank B may participate in a local clearing association that includes a number of banks that are not members of the National Clearing Association. The "On us" reference in FIG. 1 denotes items drawn on Bank B and payable by Bank B that are not exchanged in the local clearinghouse. After local settlement by Bank B and the physical transfer of items in the local clearing association, the National Clearing Association will calculate the respective debit/credit balances of Bank A and Bank B (not only to each other but to all other participating banks) and transmit the same information to the Federal Reserve for the national banking system settlement. Settlement in the National Clearing Association is wholly independent of settlement or liability of settlement in the local

In the preferred embodiment, sorting of checks between member and non-member local clearinghouse banks is done by the receiving bank. This permits the sending bank to assemble checks for sending without would recompute the settlement without the inclusion 45 sorting, except for a first sort by member locality, and permits the receiving bank thereafter to sort its local checks when its sort machines would otherwise not be in peak use. Presentation of checks for payment is thereby expedited.

Each participant in the proposed association will be better able to monitor its net settlement position throughout the banking day. On a daily basis, local clearinghouse settlements will occur before settlement by the national clearing association. In addition, reli-A principal object of and advantage achieved by the 55 ance upon large wire transfers through the Federal Reserve Bank wire network, which is created by the present environment in which many reciprocal clearing arrangements exist, will be reduced. Wire transfer fees between banks are significantly reduced or eliminated. 60 The need for reciprocal private correspondent balances with other financial institutions for the purpose of check clearing will also be eliminated for members of the system with respect to other members.

The association will also establish a procedure in the agreements between clearing banks can be standardized 65 event that a participant is unable to settle. In this event, the non-settling member's payments will be excluded; the accounting system of the association will revise the settlement entries to include only the deposits of the

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settling members of the association and will exclude items drawn on non-settling members.

In the event there is more than one member bank in a large city, means can be included in the system to allocate volume to equalize the flow of checks among the 5 members. This may reflect pro-rata or other equitable distribution of a work load among system members.

EXAMPLE I

In the continental United States, there are 12 Federal 10 Reserve Districts and 4 time zones that presently constitute obstacles to inter-district and inter-time zone settlements. Inter-city settlements by association member participant banks situated in different time zones and Federal Reserve Districts are conveniently effected by 15 the control means and the system of the invention.

In any particular locality, the participating member would first effect local settlement. All non-local checks would be sorted according to the locality of the bank on which the checks were drawn and the aggregate value 20 of such checks would be determined. In any event, non-local checks that are not submissible to the local clearinghouse are segregated from local checks, typically by a rough sort of checks according to MICR coding.

At a predetermined time, typically after the close of the banking day, each participating member: (1) will prepare and send for presentment to each other participating member all checks drawn on that other participating member; and (2) will send for collection all 30 checks to be presented for payment which are drawn on non-participant banks in the other participating member's local clearing-house district. "Collection" and "presentment" are known technical terms in the banking industry. Thus, if membership in a check clearing 35 association controlled by the means of the invention included 40 participants, each participant would usually send out in accordance with a fixed and predetermined processing time schedule, checks and accompanying Each participant in turn would receive such items from up to potentially 39 other participants. The items presented would be drawn directly on participant and on non-participant banks located in the participant's local clearing system.

A simplified two city settlement involving Los Angeles and New York as example localities is described. At a 12:00 midnight cut-off in Los Angeles, the Los 50 Angeles bank should have completed its sorting and dispatched by air to New York the sorted New York checks. The Los Angeles bank may have determined that it had been presented with \$1,000,000.00 of checks drawn in the New York area, including (1) a first quan- 55 tity of checks valued at \$800,000.00 drawn directly on the New York participant and (2) a second quantity of checks valued at \$200,000.00 drawn on banks in the local New York clearinghouse district of which the New York participant is a member.

Physical transport of the checks may be by any means provided that scheduling requirements of the system are maintained. When the checks are dispatched to New York, the fact of transmittal, information about the transmittal of the checks and the total value transmitted 65 are entered into the master association "switch". The two categories of checks represent the Los Angeles side of an anticipated settlement credited to the Los Angeles

participant arising from (1) checks drawn on the New York participant and (2) checks sent for collection to be presented to other New York banks. Thus, all checks received in New York are potential credits to the Los Angeles participant. The checks drawn on the New York participant are debits of the New York participant. All the New York non-participant checks submitted will be recorded as credits to the Los Angeles participant. The "switch" is the central control means in which information about the Los Angeles transmittal is immediately entered. The switch may be an appropriately programmed digital computer having means for

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receipt and transmission of data as well as further arithmetic or algorithmic means, to reconcile or calculate debits and credits anticipated in an essentially "real time" basis among the participating members. Net settlement occurs at a single predetermined time each day when final debits and credits among the members are calculated and effected through Federal Reserve ac-

counts. Software adapted to the system described herein may be devised by persons of skill in the financial programming computer arts. Communications to and from the switch may occur through conventional telephone links by modern connections and the like.

Immediately upon physical receipt of the checks, the New York participant enters information about the receipt of \$1,000,000.00 in checks into the switch. Thus, the Los Angeles bank receives potential or anticipated credits of \$1,000,000.00 in two categories: (1) checks drawn on the participant New York bank and presented for payment; and (2) checks for collection drawn on other banks in the New York area that are members of the New York participant bank's local clearinghouse. These anticipated credits are recorded in the switch. The anticipated credit of \$800,000.00 in the first category thus becomes an actual credit upon subsequent settlement. (The anticipated credit may be adjusted during the settlement process to produce the actual credit.) As promptly as possible in accordance with cash letters to up to potentially 39 other participants. 40 local New York clearinghouse rules, the New York participant presents the remaining \$200,000.00 of checks in favor of the Los Angeles participant drawn on non-participant New York banks for settlement at the local New York clearinghouse on behalf of the Los 45 Angeles participant. Thus, the Los Angeles participant obtains same day availability for all checks drawn on the New York participant, and when non-participant checks are presented to the New York clearinghouse that same day, the Los Angeles participant also obtains same day availability of cash from the non-participants' checks drawn on New York clearinghouse banks.

The receipt of the Los Angeles checks in New York is immediately reported to the switch or control means, and the subsequent settlements of the participant and non-participant checks are calculated by the control means to determine settlement. The New York to Los Angeles reporting and settlement procedures follow the same format, as does any other locality shipment of checks to be cleared.

A number of significant advantages are achieved through the system control means by which shipment and receipt schedules are fixed and "real time" reports of shipment and receipt are made to and accessible from the control means. The control provides a means of monitoring anticipated settlements as a result of the information recorded.

A principal advantage is the considerably enhanced availability of funds, typically on a same day basis. 5,265,007

Rough sorted check shipments to out-of-locality banks arrive and are fine sorted by the receiving participant when the receiving participant's sorters are not in peak use. Thus the system utilizes non-peak time and involves only manginal cost connected with expensive sorting 5 mechanisms. In addition, a check sort can be based on many parameters. The system only requires that a sending participant rough sort (by locality) in order to send to a participant that will thereafter do a fine sort by bank within the locality for local settlement. Thus, the 10 time within which as many checks as possible may be processed is increased, yet mechanical requirements for sorters need not be increased.

The control means monitors information about shipments and receipts from each participant. Through the 15 means, each participant sends and receives information from the others. Each participant can address the system to determine, at any point in time, anticipated (shipped and in transit) and received checks and the accompanying "cash letter" that is included in each 20 shipment. (A "cash letter" is a banking industry term referring to a listing, and total, of all checks within a shipment.)

Such information is of considerable importance to a participant's investment department, which requires 25 such information to insure effective use of cash on hand and cash anticipated to be received, or to insure that sufficient cash is available to make settlements. Thus, the control means provides a real time indication of cash needs anticipated for purposes of Federal Reserve 30 settlement.

In contrast, the Federal Reserve System typically is not as quick, and alternative correspondent systems are subject to higher fees. The present system may be devised such that no separate fees are charged among 35 members, and association membership is a shared cost. Each participant agrees to receive all items submitted by any other participant. The system reduces risk and float time and presents added time and knowledge by which inter-bank settlements may be made and intra-bank finances may be adjusted.

What is claimed is:

- 1. A mechanism for physically exchanging financial instruments among a number of pre-selected financial institutions, each located at a preselected site, and for 45 effecting the regular periodic settlement of the exchanged instruments among the institutions including:
 - (A) means within each of the pre-selected institutions:
 - (1) for sending and receiving the instruments, said means for sending including means for physically transporting the instruments from an institution at one site to each other of the institutions at the other sites, said means for receiving including means for physically accepting the instruments transported from the other institutions and it institutions and it within the site so 3. The mechanism cluding means for receiving including means for receiving institutions and it within the site so 3. The mechanism cluding means for physically accepting the institutions and it within the site so 3. The mechanism cluding means for physically accepting the institutions and it institutions and it within the site so 3. The mechanism cluding means for physically accepting in-
 - (2) for sending to and receiving from a central processing unit connected to each institution information reporting in real time in correspondence with the occurrence of an event (a) the 60 value of the instruments transported; and (b) the transport status of the instruments with respect to their having been (i) sent and (ii) received; and
 - (3) for receiving from the central processing unit a culculated value (a) on a real time basis and (b) 65 on a regular periodic settlement basis, information regarding the debits and credits owing to or payable by an institution with respect to each

other of the institutions with regard to instruments sent and received;

- (B) a central processing unit connected to each of the pre-selected institutions including
 - means for continuous monitoring on a real time basis, as reported by each institution by the means for sending information within each institution:
 - (a) (i) the sending and receipt status of the instruments and (ii) the value of the instruments sent and received, as reported by each of the institutions, and
 - (b) the status in transit of the instruments with respect to their having been (i) sent and (ii) received, as reported by each of the institutions, according to the reporting of an institution's sending and receiving of instruments,
 - (2) means for calculating debits and credits, based on the value of the instruments sent and received by the institutions, as monitored on a real time basis from information reported by the institutions, of (a) the amount owing from or payable to each one of the pre-selected institutions with respect to each of the other institutions and (b) an aggregate amount owing from or payable to each one of the pre-selected institutions with respect to all of the other institutions; and
 - (3) means for sending to each institution the information monitored with respect to instruments sent to an institution and the value of such instruments; and
- (C) a cycling means interrelated with the central processing unit (a) for controlling the physical transport of the financial instruments among the institutions and (b) for controlling the means for calculating such that a final calculation of the debits and credits owing from or payable to, with respect to each of the institutions with regard to each other of the institutions, comprising the occurrence of the regular periodic settlement among the institutions, does not occur until pre-determined local settlements by the institutions in the pre-selected sites with institutions that are not among the number of pre-selected financial institutions, are completed.
- 2. The mechanism of claim 1 further including a means at an institution by which instruments are sorted by the site locality of each other of the pre-selected institutions and in which the instruments sorted by site are sent by site sort category to institutions at sites within the site sort categories.
- 3. The mechanism of claim 2 further including a sorter at an institution which receives the instruments which sorter sorts the instruments received according to categories of:
 - (1) instruments drawn on the receiving institution; and
 - (2) instruments drawn on institutions within the site that are not among the number of pre-selected financial institutions.
- 4. A system for a financial clearinghouse comprised of an association of selected member financial institution participants situated in different localities including:
- A. means at each of the participants (1) for sending and receiving financial instruments to be cleared and (2) for sending and receiving in real time information reporting the value and transit status of the

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financial instruments to be cleared, to a programmed central processing unit, and (3) for addressing the central processing unit by which a participant may determine in real time the information received by the processing unit with respect to 5 that participant's relative credit and debit obligations with respect to other institutions arising from the instruments that are reported to be sent and received:

B. a programmed central processing unit including: 10 means for calculating debits and credits owing from or payable (1) to one member to another member and (2) from or to one member to all other members, based upon the value of instruments reported by a participant as having been 15 sent and received;

means for receiving and recording a participant's reports of the value and transit status of the instruments to be cleared as having been sent and received with respect to all participants in the system; and

5. The system of claim machine which separates mined sort categories ac the instruments are sent.

6. The system of claim system; and

means for monitoring on a real time as reported basis (1) the actual sending from and receipt by a participant of the value of instruments being cleared as reported by the participants, and (2) 25 the sending from and receipt by a participant of the actual instruments being cleared, said means for monitoring being operatively interconnected to the means for calculating whereby debits and

credits owing from one member to another may be determined and monitored on a continuous basis in real time as reports of the value and transit status of the instruments to be cleared are reported by the participants and received by the

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processing unit; and

C. a time control for determining the time of physical transport of financial instruments between and among the participants according to a predetermined time cycle, and for determining the occurrence of a final settlement by the clearinghouse participants at a pre-determined time until after a time that certain pre-determined local settlements in the localities, by the participants in the localities, are completed.

5. The system of claim 4 further including a sorter machine which separates the instruments in pre-determined sort categories according to localities to which the instruments are sent.

6. The system of claim 5 further including a sorter machine operated by a receiving participant for sorting the instruments received by the participant according to categories of:

(1) instruments drawn on that participant; and

(2) instruments drawn on different financial institutions in the locality which are not participants in the clearinghouse.

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EXHIBIT 2

UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

DATATREASURY CORPORATION § **PLAINTIFF** v. WELLS FARGO & COMPANY; WELLS FARGO BANK, NATIONAL ASSOCIATION; BANK OF AMERICA CORPORATION; BANK OF AMERICA, NATIONAL ASSOCIATION; U.S. BANCORP; U.S. BANK, NATIONAL ASSOCIATION; WACHOVIA CORPORATION; WACHOVIA BANK, NATIONAL ASSOCIATION; SUNTRUST § BANKS, INC.; SUNTRUST BANK; BB&T § CORPORATION; BRANCH BANKING AND TRUST COMPANY; BANCORPSOUTH, INC.; BANCORPSOUTH BANK; COMPASS BANCSHARES, INC.; COMPASS BANK; CULLEN/FROST BANKERS, INC.; THE FROST NATIONAL BANK; FIRST HORIZON NATIONAL CORPORATION; FIRST TENNESSEE BANK, NATIONAL ASSOCIATION; HSBC NORTH AMERICA HOLDINGS INC.; HSBC BANK USA, N.A.; HARRIS BANKCORP, § INC.; HARRIS N.A.; NATIONAL CITY CORPORATION; NATIONAL CITY § BANK; ZIONS BANCORPORATION; ZIONS FIRST NATIONAL BANK; BANK OF NEW YORK CO., INC.; THE BANK OF NEW YORK; UNIONBANCAL CORPORATION: UNION BANK OF CALIFORNIA, NATIONAL ASSOCIATION; BANK OF TOKYO-MITSUBISHI UFJ, LTD.; CITIZENS FINANCIAL GROUP, INC. CITY NATIONAL CORPORATION; CITY NATIONAL BANK; COMERICA INCORPORATED; COMERICA BANK & TRUST, NATIONAL ASSOCIATION;

Civil Action No. 2:06-CV-72 (DF)

JURY TRIAL DEMANDED

DEUTSCHE BANK TRUST COMPANY	§
AMERICAS; FIRST CITIZENS	§
BANCSHARES, INC.; FIRST CITIZENS	§
BANK & TRUST COMPANY; KEYCORP;	§
KEYBANK NATIONAL ASSOCIATION;	§
LASALLE BANK CORPORATION;	§
LASALLE BANK NA; M&T BANK	§
CORPORATION; M&T BANK; THE PNC	§
FINANCIAL SERVICES GROUP, INC.;	§
	§
UBS AMERICAS, INC.; SMALL VALUE	§
PAYMENTS COMPANY, LLC; THE	§
CLEARING HOUSE PAYMENTS	§
COMPANY, LLC; MAGTEK, INC; FIRST	§
	§
SERVICES, INC., REMITCO, LLC and	§
ELECTRONIC DATA SYSTEMS CORP.	§
	§

JURY TRIAL DEMANDED

DEFENDANTS

PLAINTIFF'S DISCLOSURES OF ASSERTED CLAIMS AND **INFRINGEMENT CONTENTIONS AS TO SVPCO**

§

Plaintiff DataTreasury Corporation ("DataTreasury") makes its Disclosure of Asserted Claims and Infringement Contentions ("Infringement Contentions") against Small Value Payment Company, LLC and The Clearing House Payments Company, LLC (collectively "SVPCo") as such products and services discussed herein inure to the benefit of all SVPCo entities. Because discovery is ongoing, DataTreasury reserves the right to add additional claims that are infringed by SVPCo and may request leave from the Court to further supplement these Infringement Contentions upon a showing of good cause.

T. **INFRINGED CLAIMS**

Plaintiff asserts Claims 1 through 6 of U.S. Patent 5,265,007 ("the '007 Patent") as being infringed by Defendants SVPCo, under 35 U.S.C. § 271(a), (b), and (c).

Plaintiff asserts Claims 1, 2, 3, 22, 24, 27, 45, 48, 61, 62, 64, and 80 of U.S. Patent

5,717,868 ("the '868 Patent") as being infringed by Defendants SVPCo under 35 U.S.C. § 271(a), (b), and (c).

In view of the limited discovery produced by Defendants SVPCo to DataTreasury, DataTreasury's Infringement Contentions are currently based on literal infringement. However, DataTreasury reserves the right to assert the Doctrine of Equivalents for one or more elements of the asserted claims.

II. IDENTIFICATION OF ACCUSED INSTRUMENTALITIES

Plaintiff identifies, for each asserted claim, each accused apparatus, product, device, process, method, act, or other instrumentality ("Accused Instrumentality") of Defendants SVPCo jointly and severally, that Plaintiff is aware of:

A. '007 PATENT

See infringement chart attached as Appendix A

B. **'868 PATENT**

See infringement chart attached as Appendix B

III. PRIORITY DATES OF ASSERTED CLAIMS

The '007 Patent issued from U.S. Patent Application Ser. No. 390,623, which is a continuation-in-part of U.S. Patent Application Ser. No. 203,489, which was filed on June 7, 1988. Claims 1 through 6 of the of the '007 Patent are entitled to a priority date of at least June 7, 1988, the date of filing the original parent application in the United States Patent & Trademark Office.

The '868 Patent issued from U.S. Patent Application Ser. No. 399,763, which was filed on March 7, 1995. Claims 1 through 91 of the '868 Patent are entitled to a priority date of at least March 7, 1995, the date of filing the original parent application in the United States Patent & Trademark Office.

Further clarification as to priority date has been provided or will be provided by Plaintiff in discovery, including the testimony of persons with knowledge of the priority date. Plaintiff reserves the right to amend the priority dates of the asserted claims.

IV. CONCLUDING STATEMENTS

Plaintiff reserves the right to unilaterally modify and supplement, without prejudice, its Disclosure of Asserted Claims and Infringement Contentions. Plaintiff fully intends to modify and supplement said Disclosure and Contentions and/or submit Amended Infringement Contentions after Plaintiffs have been given the opportunity to complete infringement discovery and an inspection of the infringing systems identified in these Infringement Contentions.

Dated December 4, 2006.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was served electronically upon all the following on the 4th day of December, 2006:

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APPENDIX A

'007 PATENT – INFRINGEMENT CONTENTIONS AS TO SMALL VALUE PAYMENTS COMPANY AND THE CLEARING HOUSE PAYMENTS COMPANY

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THE '007 PATENT CLAIMS	ACCUSED INSTRUMENTALITY
Claim 1	The proceeds is not a limitation and thus not passagent
1. A mechanism for physically exchanging financial instruments among a number of pre-selected financial institutions, each located	The preamble is not a limitation and thus not necessary for purpose of claim construction and determining infringement.
at a preselected site, and for effecting the regular periodic settlement of the exchanged instruments among the institutions including:	The Small Value Payments Company ("SVPCo") is a part of the Clearing House Payments Company. The Small Value Payments Company ("SVPCo") is a private clearinghouse for paper checks, check images, and electronic checks, and provides infringing services including at least the National Check Exchange to member and participating banks.
	Enrollment within SVPCo has at two levels, Members/Owners and Participants. All Members are considered equal owners of SVPCo, and each member has equal governance and voting rights in SVPCo through the SVPCo Board of Directors.
	The National Check Exchange is a national check clearing system. It allows financial institutions to exchange checks and other items across regions of the country using a universal set of rules. Currently, over 400 banks, representing \$3.6 trillion in checks exchanged each year, are participants in the exchange.
	SVPCo's National Check Exchange infrastructure and rules provides for the physical exchange of financial instruments among the SVPCO Members and Participants for effecting a structured settlement of each financial instrument.
(A) means within each of the preselected institutions:	This claim element is governed by 35 U.S.C. § 112(6).
(1) for sending and receiving the	SVPCo and member institutions of the National Check
instruments, said means for	Exchange can each physically send or receive financial
sending including means for	instruments (e.g., checks or substitute checks) to and

THE '007 PATENT CLAIMS ACCUSED INSTRUMENTALITY AND ASSESSED. physically transporting the from other institutions via air and ground transportation instruments from an institution at (means for sending including physically transporting the instruments from and institution at one) from and to a one site to each other of the institutions at the other sites, said facility (means for sending and receiving the means for receiving including instruments) utilized by a Member and/or Participant.. means for physically accepting the instruments transported from the The Clearing House Payments Company has facilities in Connecticut, New Jersey, Pennsylvania, Boston, New other institutions; York, Philadelphia, Chicago, Los Angeles, and San Francisco, as well as other locations. SVPCo and member institutions of the National Check (2) for sending to and receiving from a central processing unit Exchange each have a communications network for connected to each institution exchanging data with a conventional programmable information reporting in real time computer(s) (e.g., SVPCo's SQL server) with associated in correspondence with the software that provides real time reporting on the occurrence of an event (a) the settlement of a transported financial instrument(s) value of the instruments including the production of a cash letter which includes transported; and (b) the transport the value of the financial instruments. Members of the status of the instruments with National Check Exchange can monitor the transport respect to their having been (i) sent status of the financial instruments throughout the and (ii) received; and settlement process between the settling parties. (3) for receiving from the central SVPCo and the Member institutions have a processing unit a calculated value communications network that receives from the (a) on a real time basis and (b) on a conventional programmable computer(s) (e.g., SVPCo's regular periodic settlement basis, SQL Server) real-time data calculated on a predetermined information regarding the debits schedule (rules implemented by the Clearing House) and credits owing to or payable by regarding the debits and credits owed or payable between an institution with respect to each financial institutions through the settlement process. other of the institutions with regard to instruments sent and received; (B) a central processing unit The conventional programmable computer(s) (e.g., connected to each of the pre-SVPCO's SQL Server) connects to member institutions. selected institutions including (1) means for continuous This claim element is governed by 35 U.S.C. § 112(6). monitoring on a real time basis, as reported by each institution by the The conventional programmable computer(s) (e.g., means for sending information SVPCo's SQL Server) monitors cash letter files created within each institution; by member institutions according to the transmission capabilities of each institution.

THE '007 PATENT CLAIMS	ACCUSED INSTRUMENTALITY
(a) (i) the sending and receipt status of the instruments and (ii) the value of the instruments sent and received, as reported by each of the institutions, and	The conventional programmable computer(s) (e.g., SVPCo's SQL Server) tracks the status of the financial instruments, which includes the cash value of the instruments.
(b) the status in transit of the instruments with respect to their having been (i) sent and (ii) received, as reported by each of the institutions, according to the reporting of an institution's sending and receiving of instruments,	The conventional programmable computer(s) (e.g., SVPCo's SQL Server) also is updated with tracking information as to the transport status of the actual financial instruments as they are physically transported through the settlement process.
(2) means for calculating debits and credits, based on the value of the instruments sent and received by the institutions, as monitored on a real time basis from information reported by the institutions, of (a) the amount owing from or payable to each one of the pre-selected institutions with respect to each of the other institutions and (b) an aggregate amount owing from or payable to each one of the pre-selected institutions with respect to all of the other institutions; and	This claim element is governed by 35 U.S.C. § 112(6). The National Check Exchange accounting system (which is software implemented) balances or calculates the allocation of debits and credits among the member institutions participating in the National Check Exchange.
(3) means for sending to each institution the information monitored with respect to instruments sent to an institution and the value of such instruments; and	This claim element is governed by 35 U.S.C. § 112(6). A communications network provides for institutions to receive the tracked information and cash letter file.
(C) a cycling means interrelated with the central processing unit (a) for controlling the physical transport of the financial instruments among the institutions and (b) for controlling the means for calculating such that a final calculation of the debits and	This claim element is governed by 35 U.S.C. § 112(6). The conventional programmable computer(s) (e.g., SVPCo's SQL Server) controls on a predetermined time schedule (e.g., daily at 3 p.m.) the physical transport of the instruments and controls the settlement of the instruments among the institutions in the National Check Exchange such that settlement of the instruments via the

THE '007 PATENT CLAIMS	ACCUSED INSTRUMENTALITY
credits owing from or payable to,	National Check Exchange is achieved before local
with respect to each of the	settlement by the institutions.
institutions with regard to each	
other of the institutions,	
comprising the occurrence of the	
regular periodic settlement among	
the institutions, does not occur	
until pre-determined local	
settlements by the institutions in	
the pre-selected sites with	
institutions that are not among the	
number of pre-selected financial	
institutions, are completed.	
Claim 2	The property of the state of th
2. The mechanism of claim 1	This claim element is governed by 35 U.S.C. § 112(6).
further including a means at an	
institution by which instruments	Sorter devices at each of the institutions utilize MICR
are sorted by the site locality of	information to site sort the checks and generate bundles
each other of the pre-selected	and cash letters for forwarding to such institutions for
institutions and in which the	payment.
instruments sorted by site are sent	
by site sort category to institutions	
at sites within the site sort	
categories.	
Claim 3	No. of the control of
3. The mechanism of claim 2	The sorter devices use MICR line information to sort
further including a sorter at an	checks drawn on both member institutions and non-
institution which receives the	member institutions. The MICR line information comes
instruments which sorter sorts the	from instruments drawn on the receiving institution,
instruments received according to	whether the receiving institution is or is not a member of
categories of:	SVPCo.
(1) instruments drawn on the	The sorter devices use MICR line information to sort
receiving institution; and	checks drawn on both member institutions and non-
	member institutions. The MICR line information comes
	from instruments drawn on the receiving institution,
	whether the receiving institution is or is not a member of
	SVPCo.
(2) instruments drawn on	The sorter devices use MICR line information to sort
institutions within the site that are	checks drawn on both member institutions and non-
not among the number of pre-	member institutions. The MICR line information comes
selected financial institutions.	from instruments drawn on the receiving institution,
	whether the receiving institution is or is not a member of
	SVPCo.

such as The Clearing House Interbank Payments System,

Electronic Payments Network, Electronic Clearing Services, National Check Exchange, and the Midwest

Automated Clearing House Association.

ACCUSED INSTRUMENTALITY: THE '007 PATENT CLAIMS Claim 4 4. A system for a financial The preamble is not a limitation and thus not necessary clearinghouse comprised of an for purpose of claim construction and determining association of selected member infringement. financial institution participants situated in different localities The Small Value Payments Company ("SVPCo") is a including: part of the Clearing House Payments Company. The Small Value Payments Company ("SVPCo") is a private clearinghouse for paper checks, check images, and electronic checks, and provides infringing services including at least the National Check Exchange to member and participating banks. Enrollment within SVPCo has at two levels, Members/Owners and Participants. All Members are considered equal owners of SVPCo, and each member has equal governance and voting rights in SVPCo through the SVPCo Board of Directors. The National Check Exchange is a national check clearing system. It allows financial institutions to exchange checks and other items across regions of the country using a universal set of rules. Currently, over 400 banks, representing \$3.6 trillion in checks exchanged each year, are participants in the exchange. SVPCo's National Check Exchange infrastructure and rules provides for the physical exchange of financial instruments among the SVPCO Members and Participants for effecting a structured settlement of each financial instrument. SVPCo's National Check Exchange was created from the merger of check operations in the Eastern, Central and Western U.S. following The Clearing House's acquisition of the check clearing business of the New York Clearing House, Western Payments Alliance, the Chicago Clearing House Association, Small Value Payments Company ("SVPCo"), and their various subsidiaries,

****THE '007 PATENT CLAIMS**

A. means at each of the participants (1) for sending and receiving financial instruments to be cleared and (2) for sending and receiving in real time information reporting the value and transit status of the financial instruments to be cleared, to a programmed central processing unit, and (3) for addressing the central processing unit by which a participant may determine in real time the information received by the processing unit with respect to that participant's relative credit and debit obligations with respect to other institutions arising from the instruments that are reported to be sent and received;

** ACCUSED INSTRUMENTALITY

This claim element is governed by 35 U.S.C. § 112(6).

SVPCo and member institutions of the National Check Exchange each send or receive financial instruments (e.g. checks or substitute checks) to and from other institutions via air or ground transportation and/or via a communications network (means for sending and receiving financial instruments to be cleared) utilized by a Member and/or Participant. Sorters are used at the institutions to receive the checks, electronic checks, or substitute checks delivered from other institutions.

The Clearing House Payments Company has facilities in Connecticut, New Jersey, Pennsylvania, Boston, New York, Philadelphia, Chicago, Los Angeles, and San Francisco, as well as other locations.

SVPCo and member institutions of the National Check Exchange each have a communications network for exchanging data with a conventional programmable computer(s) (e.g., SVPCo's SQL Server) with associated software that provides real time reporting on the value and transit status of financial instrument(s) to be cleared including the production of a cash letter which includes the value of the financial instruments and reporting of each institution's credit and debit status in relation to other member institutions based on the reported instruments. Members of the National Check Exchange can monitor the transport status of the financial instruments throughout the settlement process between the settling parties.

B. a programmed central processing unit including:

The conventional programmable computer(s) (e.g., SVPCo's SQL Server) connects to member institutions.

means for calculating debits and credits owing from or payable (1) to one member to another member and (2) from or to one member to all other members, based upon the value of instruments reported by a participant as having been sent and received;

This claim element is governed by 35 U.S.C. § 112(6).

The National Check Exchange accounting system (which includes software) balances or calculates the allocation of debits and credits among the member institutions participating in the National Check Exchange.

THE '007 PATENT CLAIMS

means for receiving and recording a participant's reports of the value and transit status of the instruments to be cleared as having been sent and received with respect to all participants in the system; and

ACCUSED INSTRUMENTALITY

This claim element is governed by 35 U.S.C. § 112(6).

The National Check Exchange accounting system (which includes software) receives and records the value and transit status of the instruments to be cleared. SVPCo and the Member institutions have a communications network that receives from the conventional programmable computer(s) (e.g., SVPCo's SQL Server) real-time data calculated on a predetermined schedule regarding the debits and credits owed or payable between financial institutions through the settlement process.

means for monitoring on a real time as reported basis (1) the actual sending from and receipt by a participant of the value of instruments being cleared as reported by the participants, and (2) the sending from and receipt by a participant of the actual instruments being cleared, said means for monitoring being operatively interconnected to the means for calculating whereby debits and credits owing from one member to another may be determined and monitored on a continuous basis in real time as reports of the value and transit status of the instruments to be cleared are reported by the participants and received by the processing unit; and

This claim element is governed by 35 U.S.C. § 112(6).

The conventional programmable computer(s) (e.g., SVPCo's SQL Server) monitors in real time the sending and receipt by a member institution of the value of the instruments to be cleared. The National Check Exchange accounting system works with the computer(s) to monitor in real time the debit and credit status of the instruments to be cleared between and among member institutions.

The National Check Exchange accounting system (which includes software) balances or calculates the allocation of debits and credits among the member institutions participating in the National Check Exchange.

C. a time control for determining the time of physical transport of financial instruments between and among the participants according to a predetermined time cycle, and for determining the occurrence of a final settlement by the clearinghouse participants at a predetermined time until after a time that certain pre-determined local The conventional programmable computer(s) (e.g., SVPCo's SQL server) determines on a predetermined time schedule (e.g., daily at 3p.m.) the physical transport of the instruments and determines the occurrence of a settlement of the instruments among the institutions in the National Check Exchange such that settlement of the instruments via the National Check Exchange is achieved before local settlement by the institutions.

THE 007 PATENT CLAIMS	ACCUSED INSTRUMENTALITY
settlements in the localities, by the participants in the localities, are completed.	ACCUSED ENSTRUMENTABILITY
Claim 5	
5. The system of claim 4 further including a sorter machine which separates the instruments in predetermined sort categories according to localities to which the instruments are sent.	Sorter devices at each of the institutions utilize MICR information to site sort the checks and generate bundles and cash letters for forwarding to such institutions for payment.
Claim 6	
6. The system of claim 5 further including a sorter machine operated by a receiving participant for sorting the instruments received by the participant according to categories of:	The sorters in claim 5 not only use MICR to sort checks drawn on member institutions but utilize MICR to facilitate the payment process for non-members as well. The MICR line information comes from instruments drawn on the receiving institution, whether the receiving institution is or is not a member of SVPCo.
(1) instruments drawn on that participant; and	Sorter (identified in claim 5) identifies "on us" instruments; and
(2) instruments drawn on different financial institutions in the locality which are not participants in the clearinghouse.	The sorter identifies non-members of Clearing House clearing checks in the United States and its Territories.
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EXHIBIT 3



IN THE UNITED STATES DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

RECEIVED

In re application of

Serial No.: 390,623

DEC | 7 MyZpaper No. 17

U.S. Filing Date: August 7, 1989 GROUP 2300 Examiner: Laura Brutman Art Unit: 2311

For: Central Check Clearing System

41 South High Street

Attorney Docket No.: 1260900-50349

Columbus, Ohio 43215

December 8, 1992

The Honorable Commissioner : of Patents and Trademarks. Washington, D.C. 20231

AMERICAENT

This is a response to the Official Communication mailed in this application on August 10, 1992. Entry of this amendment, reexamination and reconsideration are requested.

AMEND THE CLAIMS AS FOLLOWS:

A. Cancel Claims 1-6 and substitute Claims 7-12 as follows:

A mechanism for controlling the physical exchange of ≠inancial instruments among/a nymber of pre-selected financial institutions, each located at a preselected site, and for effecting the regular periodic settlement of the instruments among the institutions including:

(A) means within each institution:

- (1) for sending and receiving the instruments, said means for sending including means for physically transporting the instruments from an institution at one site to each other of the institutions at the other sites, said means for receiving including means for physically accepting the instruments transported from the other institutions;
- (2) for sending to and receiving from a central processing unit connected to each institution information reporting (a) the value of the instruments transported; and (b) the transport status of the instruments with respect to their having been (i) sent and (ii) received; and
- (3) for receiving from the central processing unit a talculated value (a) on a real time basis and (b) on a regular periodic settlement basis, information regarding the debits and credits owing to or payable by an institution with respect to each other of the institutions with regard to instruments sent and received;
- (B) a central processing unit connected to each institution including

. B.

- (1) means for monitoring on a /real time basis, as reported by each institution by the means for sending information within each institution:
 - (a) (i) the sending and receipt status of the instruments and (ii) the value of the instruments sent and received, as reported by each of the institutions, and
 - (b) the status in transit of the instruments with respect to their having been (i) sent and (ii) received, /as reported by each of the institutions,
- (2) means for calculating/debits and credits, based on the value of the instruments sent and received, as monitored on a real time basis from information reported by the institutions, of (a) the amount owing from or payable to each one of the pre-selected institutions with respect to each of the other institutions and (b) an aggregate amount owing from or payable to each one of the pre-selected institutions with respect to all of the other institutions; and
- (3) means for senting to each institution the information monitored with respect to instruments

sent to an institution and the value of such instruments; and

- (C) a cycling means (a) for controlling the physical transport of the financial instruments among the institutions and (b) for controlling the means for calculating such that a final calculation of the debits and credits owing from or payable to, with respect to each of the institutions with regard to each other of the /institutions, comprising occurrence of the regular periodic settlement among the institutions, does not occur until after a time pre-determined that local settlements institutions in pre-selected sites institutions that not among the number of are pre-selected financial institutions, are completed.
- 8. The mechanism of claim 7 further including a means at an institution which sends instruments by which instruments are sorted by the site locality of each other of the pre-selected institutions and in which the instruments sorted by site are sent by site sort category to institutions at sites within the site sort categories.
- The mechanism of claim 8 further including a sorter at an institution which receives the instruments which sorts the instruments received according to categories of:

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- instruments drawn on the receiving institution; (1) and
- instruments drawn of institutions within the (2) site that are not among the number of pre-selected financial institutions.
- A system for a financial clearinghouse comprised of association of selected member financial institution participants situated in different localities including:
 - means at each of the participants (1) for sending and receiving financial instruments to be cleared and (2) for sending and receiving information reporting the value and transit status of the financial/instruments to be cleared, to a programmed central processing unit, said means including further means for addressing a central processing unit by which a participant may determine the information received by the processing unit with respect to that participant's relative | **obligations** arising instruments to be cleared;
 - a programmed central processing unit including:

means for calculating debits and credits (1) owing from or to one member to another member and (2) from one member to all other members, based upon the value

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means for receiving and recording a participant's reports of the value and transit status of the instruments to be cleared as having been sent and received with respect to all participants in the system; and

means for monitoring on a real time as reported basis (1) the actual sending from and receipt by a participant of the value of instruments being cleared as reported by the participants, and (2) the sending from and receipt by a participant of the actual instruments being cleared said means for monitoring being operatively interconnected to the means for calculating whereby debits and credits owing from one member to another may be determined and monitored in real time as reports of the value and transit status of the instruments to be cleared are reported by the participants and received by the processing unit; and

C. a time control for determining the time of physical transport of financial instruments between and among the participants according to a predetermined time cycle, and for determining the occurrence of a final settlement by the clearinghouse participants at a pre-determined time until

after a time that pre-determined local settlements in the localities by the participants are completed.

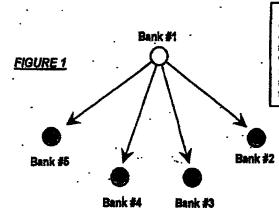
- 11. The system of claim 10 further including a sorter machine which separates the instruments in pre-determined sort categories on behalf of a participant.
- 12. The system of claim 11 in which the sorter is a sorter machine operated by a receiving participant and includes means for sorting such instruments according to categories of:
 - (1) instruments drawn on that participant; and
 - (2) instruments received by the participant which are drawn on different financial institutions in the locality which are not participants in the clearinghouse.

REMARKS

For clarity, Claims 1-6 have been cancelled and rewritten as Claims 7-12. In the redrafted claims an attempt has been made to respond to each of the Examiner's specific concerns raised in the Official Communication. The Examiner's careful comments are appreciated and have been of assistance in clarifying the claimed subject matter.

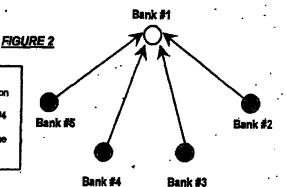
As to each of the Examiner's comments or inquiries, an appropriate response is set forth, in order, below:

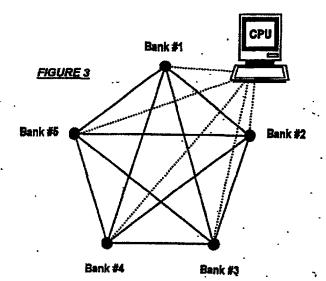
- A. With reference to the rejection of the claims under 35 U.S.C. \$112.
- 1. The institutions are located at preselected sites; the reporting of information and transport of instruments takes place at the institution.
- 2. Means to read the information is not <u>per se</u> an element of the clearinghouse invention. Means for reading checks are well known in the banking art. (<u>See</u> the MICR code on any check.) The clearinghouse effects a settlement among the institutions or participants based on an aggregate value of items cleared by the receiving participant.
- 3. The terms "instruments" and "currency" have been clarified; the operative element of the mechanism is the "value" of the "instruments", which is now positively recited as a claim element.
- 4. Each "site", namely the institution at a predetermined locality, interacts with every other site. If there were 5 sites or institutions the relationship would be as shown in the illustrations and explanations on page 9.
- 5. Means for sending and receiving information about the value and transit (or transport) status are positively recited.



Bank #1 sends to Banks #2, #3, #4 and #5 : (1) checks drawn on Banks #2, #3, #4 and #5; and (2) chacks drawn on non-member banks in the localities of Banks #2, #3, #4 and #5. Debit/credit belances of Bank #1 with Banks #2, #3, #4 and #5 are calculated and settlement occurs through the Federal Reserve. Banks #2, #3, #4 and #5 clear the checks of the non-members at the local clearinghouse settlement.

Bank #1 receives from Banks #2, #3, #4 and #5: (1) checks drawn on Bank #1; and (2) checks drawn on non-member banks in the locality of Bank #1. Debit/credit belances of Bank #1 with Banks #2, #3, #4 and #5 are calculated and settlement occurs through the Federal Reserve. Bank #1 clears the checks of the non-members at the local clearinghouse settlement.





All member Banks #1, #2, #3, #4 and #5 are inter-connected by transport means for the checks and by the CPU which provides the time control, and monitors and reports information about the value and transit status of the checks, and caculates debits and credits arising from (1) the member settlement and (2) the local settlement of checks received. The members' final settiement integrates the members' and the local settlements in which the members participate.

- 6. In a clearing house mechanism such as depicted in the page 9 illustrations, the relative debits and credits of all institutions are settled with respect to all other institutions. For example, in a settlement effected by the clearing house, Bank #1 may receive \$1.00 from Bank #2; \$2.00 from Bank #3 and \$3.00 from Bank #4, but may owe Bank #5 \$4.00, all depending on the value of the instruments exchanged. The settlement is determined by the calculation of debits and credits among the member banks based on checks sent and received. The same analysis will apply to each other bank in the clearinghouse mechanism,
- 7. "Clearing" in the banking sense refers to the process of sending and receiving and the allocation of aggregate net debits and credits, and the payment thereof, associated with a particular institution, determined by the value of the instruments presented to or by that institution for payment with regard to another institution, or other institutions.
- 8. The "means for sending" and "the means for reporting" are distinguished. The former relates to the physical transport of the instruments (e.g. the sending (transportation) of checks) from one bank to another bank at a different location. The latter, reporting, relates to the communication of information to and from the bank and the CPU about the value and transit status of the instruments sent.

- 9. "Real time" monitoring relates an event in real time as a report of the event's occurrence is made to the CPU at the approximate time of occurrence.
- 10. "Cycling means" is an appropriate term to use in describing the settlement mechanism because a clearinghouse mechanism must function on a regular and periodic, or cyclical, basis.
- 11. In Claim 8 (formerly claim 2), again referring to the page 9 illustrations, the sorter, for example, at Bank #1, would sort the instruments according to the site localities in which Banks #2, #3, #4 and #5 are located. Bank #5 instruments would be sorted upon receipt according to (a) instruments drawn on Bank #5 and (b) instruments, separately for each different bank in the locality, not drawn on Bank #5. This latter category of local region #5 instruments is additionally cleared by Bank #5 in the local clearing house settlement of Bank #5.
- 12. In Claim 10 (which replaces Claim 4), the debits and credits are calculated based on the value of the corresponding instruments sent and received.
- 13. The significance of the means for reading the information is discussed above in Paragraph 2.
 - 14. The receiving of the information is from a participant.

- 15. The sending and receipt is from and by a participant.
- 16. The "items" and the "actual financial instruments" are synonymous; the amended claims have been conformed to provide a consistent reference.
- 17. The "means for addressing the processing unit" refers to the means at the institution for communicating with the CPU, now included in paragraph A. of Claim 10.
- 18. Although now restated, the means at the institution allows the institution to determine the status of its own account, i.e. the relative debit owing and/or credit payable and transit status of items sent and received by an individual institution, by addressing the remote CPU which monitors, calculates and reports such information.
- 19. While a "time control" is a schedule, a clearinghouse system or mechanism depends on the regular physical transport and exchange of items from and to each of all of the institutions in the predetermined group. Hence, in a clearinghouse, a mechanism is necessary by which the transport can be regularly controlled on a cyclic basis. Control of the transport time is analogous to the control of the combustion cycle in a multi-cylinder engine. There must be a time control, correlating associated events with each other, if the

mechanism is to run smoothly. Thus, the time control is a: determinant that the clearing of instruments occurs regularly.

20. In claims 11 and 12 (replacing claims 5 and 6) the function of the sorter mechanism is illustrated by the examples described by Paragraphs 11 and 12 above and shown in the page 9 illustrations.

As is evident from the above comments and the revisions to the claims, applicant has clarified, and distinctly set forth in the revised claims the mechanism of the clearinghouse system which is the invention sought to be patented.

- With reference to the rejection of the claims under 35 U.S.C. \$112, first and second paragraphs:
- As noted earlier, the "cycling means" is necessary to operate the clearinghouse mechanism on a regular periodic hasis on a strictly controlled schedule. A clearinghouse mechanism does not permit "someone to interpret the schedule". When a time in the cycle arrives, the required act must be done. The time information has two components: (1) the real time at which instruments are sent and received, e.g., "Monday, October 19, 1992 at 1:38 p.m. Eastern time"; and (2) the time required by the cycle, e.g., "all instruments must be received on Monday, October 19, 1992 by 5:30 p.m. Eastern time".

One familiar with the banking art will appreciate the need to require absolute and certain closing times for the exchange of instruments and for clearing the debits and credits

associated with the financial instruments exchanged. It is well known that every CPU included in a modern PC includes a clock which monitors time. As to the Examiner's reference to "no support" for the timing mechanism, Figure 1 of the Specification shows that the CPU provides "Master Scheduling" and "real time calculations."

C. With reference to the rejection under 35 U.S.C. \$101: Relevant case law was addressed in applicant's prior amendment (Paper No. 12).

Clearinghouses are commonly referred to as "mechanisms" in the banking industry. The present invention provides a tangible connected system by which physical items are mechanically transported and information about the items and their transport is monitored and calculated by interrelated apparatus at different sites. The invention is not just "a method of doing business"; it is an interrelated system, or a mechanism, having linked physical components and definitely stated physical and informational interactions. [See page 9 illustrations. See also references of record cited in Paper No. 3]. Thus, the invention as now claimed is clearly defined as a "process, art or method", as specifically provided in 35 U.S.C. Sections 100 and 101.

D. Conclusion.

For these reasons, the amendment to the application is considered to place claims 7-12 in compliance with 35 U.S.C. §§

101 and 112. The withdrawal of the rejection and the allowance of this application is requested. Applicant notes that no prior art has been cited and/or applied in the prosecution . hereof which is considered to disclose or suggest the claimed invention.

Reexamination, reconsideration and allowance are therefore requested.

Respectfully submitted,

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CERTIFICATE OF FILING BY MAIL

I hereby certify that this Amendment accompanied by a Petition for Extension of Time (2 copies), are being deposited with the United States Postal Service (Postage prepaid, first class mail) in an envelope addressed to The Honorable Commissioner of Patents and Trademarks, Washington, D.C. 20231, on December 8, 1992 and pursuant to the provisions of 37 C.F.R. 1.8, it is requested that December 8, 1992 be the filing date accorded to these documents.

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