

EXHIBIT 4



IN THE UNITED STATES DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

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In re application of:

PATENT

Inventors: Barnhard, et al.
Serial No.: 390,623

Paper No. 23

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

For: Central Check Clearing System

41 South High Street

Attorney Docket No.: 1260900-50349

Columbus, Ohio 43215

June 29, 1993

The Honorable Assistant Secretary
and Commissioner of Patents
and Trademarks

Box AF
Washington, D.C. 20231

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SECOND AMENDMENT AFTER FINAL ACTION
AND STATEMENT PURSUANT TO 37 C.F.R. §1.116(b)

I. Introduction

This is a response to the advisory action mailed in this application on May 20, 1993. Entry of this amendment, reexamination and reconsideration are requested. A Statement Pursuant to 37 C.F.R. §1.116(b) setting forth the reasons for entry of this Amendment is included at page 10, *infra*.

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By Express Mail, Receipt No. 980625349, June 29, 1993

~~II. Amend Claims 7 and 10 as Follows:~~

CM 1 X A. mechanism for physically exchanging financial instruments among a number of pre-selected financial institutions, each located at a preselected site, and for effecting the regular periodic settlement of the exchanged instruments among the institutions including:

PI (A) means within each of the pre-selected institutions:

DI P2B (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;

P2B (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 value of the instruments transported; and (b) the transport status of the instruments with

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respect to their having been (i) sent and (ii) received; and

P2B (3) for receiving from the central processing unit a calculated 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;

P1 (B) a central processing unit connected to each of the pre-selected institutions including

P2B (1) means for continuous monitoring on a real time basis, as reported by each institution by the means for sending information within each institution:

P3 (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

P3 (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,

P2B

(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

P2B

(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

P1

(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

DL
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.

10. 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 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;

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B. a programmed central processing unit including:

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;

D²
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 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

D2
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.

III. Remarks

The Examiner's withdrawal of the rejection under 35 U.S.C. §112 is noted. The foregoing amendments are made in view of Examiner's continuation of the rejection under 35 U.S.C. §103.

The claims and cited references S, T and U were discussed in detail in the Amendment filed on May 5, 1993 (Paper No. 20). In general, the references related to settlement mechanisms and methods for electronic funds transfer.

Applicant submits that amended claims 7 and 10 patentably distinguish the invention over the references of record.

As amended claims 7 and 10 now clarify the invention, the real time component of the mechanism and the provision of continuous reporting is set forth in a Combination that otherwise includes a plurality of institutions at different sites, the exchange of physical instruments by transportation means, and the coordination of the net settlement, in real

time, as information about the instruments and their value are reported as sent and received under the umbrella of a predetermined schedule or cycle. In contrast, typical clearings between two banks need not be accomplished according to a schedule. And net settlements among a plurality of banks occur at a single location, at which the settlement instruments are exchanged, at a fixed time.

In the invention of the amended claims, the fluidity of a real time mechanism is evident as opposed to the static clearing and settlement mechanism of the references. Namely, once data is entered, the information is there for all participants to see. The monitoring of data, in co-ordination with the physical exchange of instruments as they are dispatched and received for settlement speeds up the clearing process. The mechanism is not simply a physical exchange, nor is the mechanism merely an electronic funds transfer. The mechanism of the amended claims co-ordinates both in a system in which actual instruments are exchanged between and among institutions. Real time coordination occurs such that continuous reporting and monitoring allow for efficient funds management, i.e., the preparation of funds needed to effect settlement, or the utilization of funds received at settlement, or to plan for the utilization of mechanical sorters, which would otherwise sit idle. In the system of the claimed mechanism, the institutions do not need to "wait until the witching hour" (as in conventional settlements) when funds and

instruments are physically settled to determine their respective liabilities. The mechanism is a continuous and active process conducted and monitored by a plurality of participants, as the instruments are in various stages of transport and/or exchange, in real time; and as the participants' settlement obligations are determined, they are available for continuous monitoring by the participants.*

For these reasons, the amendments to claims 7 and 10 are considered to result in their allowability. The dependent claims, 8 and 9, dependent on claim 7, and 11 and 12, dependent on claim 10, relate to variations of sorter configuration in the systems of claims 7 and 10 and are distinguishable over the references cited as are the claims on which they depend.

Reexamination, reconsideration and allowance are therefore requested.

IV. Submission of Proposed Formal Drawings

Appended hereto is one sheet of formal drawings for which the Examiner's approval is requested. The proposed drawing (Figure 1) conforms to the informal drawing originally submitted. Extraneous material is deleted.

* An article from the ABA Banking Journal, May 1993 (pages 62-66) entitled "Electronic check clearing alternatives take shape" is enclosed. The article describes the newly implemented NCHA/CHEKS system which utilizes the invention.

V. Statement Pursuant to 37 C.F.R. §1.116(b)

Applicant submits that the foregoing amendment should be admitted because of the following good and sufficient reasons why it is necessary and was not earlier presented:

Applicants consider the amendment places all claims in condition for allowance by avoiding the sole grounds under 35 U.S.C. §103 that are asserted for rejection. The allowability of the claims after a minor amendment is a classic reason justifying the entry of an amendment after final rejection. See M.P.E.P. §714.12.

Both the Examiner and applicants have carefully considered the references cited during prior prosecution of the application; no additional search is required. It appears evident that the clarifying distinction made in amended claims 7 and 10 puts the application in condition for allowance.

VI. Conclusion

It is requested that the amendment be entered and this application allowed and passed to issue.

Respectfully submitted,



Edwin M. Baranowski
Reg. No. 27,482
PORTER, WRIGHT, MORRIS & ARTHUR
41 South High Street, Suite 2800
Columbus, Ohio 43215
(614) 227-2188

CERTIFICATE OF FILING BY EXPRESS MAIL

I hereby certify that this Second Amendment After Final Action and Statement Pursuant to 37 C.F.R. §1.116(b) (including proposed formal drawing and copy of article) accompanied by a Petition for Extension of Time and Payment of Fee Under 37 C.F.R. §1.136 (2 copies), Check No. 214743, a cover letter and post card receipt in the below captioned application, are being deposited with the United States Postal Service (Postage prepaid, Express Mail, Receipt No. 980625371) in an envelope addressed to The Honorable Commissioner of Patents and Trademarks, Attention: Box AF, Washington, D.C. 20231, on June 29, 1993 and pursuant to the provisions of 37 C.F.R. 1.10, it is requested that June 29, 1993 be the filing date accorded to these documents.

Edwin M. Baranowski

Edwin M. Baranowski
Porter, Wright, Morris & Arthur
41 South High Street
Columbus, Ohio 43215
(614) 227-2188

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BAR/1546/59-69

◆ COVER REPORT/OPERATIONS ◆

Electronic check clearing alternatives take shape

There's a brave new world of check clearing on the horizon, and paper checks have little to do with it...maybe

By Patricia A. Murphy

If your memory is long enough in this business you'll recall numerous attempts at rolling back the sea of paper checks processed and cleared by banks each year.

The automated clearing house system, after all, was intended to do this. While it has slowed check growth, it hasn't reversed the upward trend of check volume in the two decades since the system was created. Check truncation, electronic check collection, and other efforts to reduce the paper flow have also been introduced, and some of them remain active.

Will the '90s bring a different approach to check processing? Quite possibly, yes.

For one thing, increased competition continues to press banks to contain costs and improve operating efficiency. For another, electronic technology has advanced a lot farther than the early days of the ACH. As a result, several electronic check clearing and truncation projects hold promise for reducing or at least maintaining the cost of clearing paper checks.

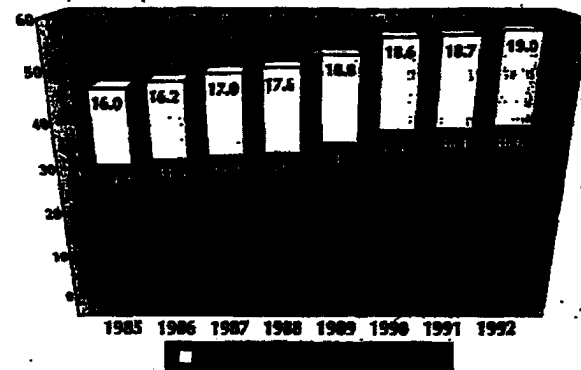
Proponents admit that big cost reductions won't come in the short term. But there is a strong possibility that banks will see reductions in loss exposures, a general containment of the estimated \$40 billion tab spent each year on check clearing, and new opportunities to enhance revenue streams through check services.

Privatization. By modernizing the check clearing process, many bankers also hope the industry will be able to wrest control of the payments system from the Federal Reserve.

"Privatization of the payments sys-

Writer Patricia A. Murphy covers electronic banking developments from Takoma Park, Md.

Check Volume (in billions)



The Federal Reserve commands a healthy percentage of total check-clearing volume, but that percentage has been diminishing slightly since 1985. Most experts attribute the drop in the Fed's share of clearing volume more to industry consolidation than to increased competition.

Source: Federal Reserve Board

tem is absolutely necessary for the survival of banking," insists Dick Ercole, president of Huntington Technology Co., Columbus, Ohio. "It's really the last franchise we have."

The Huntington Bancshares unit manages a new national check-exchange system called the National Clearinghouse Association (NCHA). The system is an example of a joint-venture approach to check-clearing that competes with the Fed and works to improve revenue streams for member banks.

NCHA, which is also known as CHEXS (for Check Exchange System), is the product of an alliance between Huntington; Littlewood, Shain & Company (an Exton, Pa.-based consulting firm); and U.S. Check (a Columbus-based air courier service). The organization was created in 1992

to provide a national check clearing and settlement apparatus through member participation in local clearing houses.

Beyond check clearing. The primary intent of NCHA was to undercut the prices charged by Federal Reserve Banks for check-collection services by expanding the local clearing house mechanism nationwide. But already, NCHA members are preparing to exploit their affiliations with the group to enhance correspondent and corporate cash-management services.

"There are a lot of products that can come out of these initiatives," notes Ercole. Among them: check clearing for downstream correspondents, electronic check returns, and enhanced cash-management reporting.

At last count, there were 18 banks participating in the CHEXS system;

◆ COVER REPORT/OPERATIONS ◆

exchanging checks in about 30 cities. Banks participating in NCHA agree to accept checks from all other members of the national clearing house for presentation to paying banks through local clearing house affiliations.

From the vantage of Ercole and others, NCHA is ideally suited for banks looking to contain costs without the large up-front investments required of other, high-technology approaches to check clearing, like electronic check presentation (ECP).

NCHA members, Ercole explains, incur a total cost of 1.05 cents for each check cleared through the system, compared with anywhere from one cent to five cents per item for clearing checks through the Federal Reserve. And unlike electronic check presentation, NCHA requires no new investments in software.

"It's definitely cheaper than ECP," says Ercole of the NCHA approach to clearing checks.

Perhaps. But ECP brings to the table its own set of advantages, a fact that Ercole concedes. "ECP is ulti-

CHECK-CLEARING TERMS AND PLAYERS

Alternative check-clearing arrangements are ushering in a whole new vernacular for the check operations business. The following are some of the more commonly used terms in today's check-clearing community.

• **ECP (Electronic Check Presentation):** The generic acronym used to describe the process of transmitting check magnetic ink character recognition (MICR) information electronically ahead of the actual movement of paper items. In the traditional sense, ECP is a bank-to-bank process. But the data necessary to present checks electronically also can be captured at the point of sale, thereby entering the merchant into the process.

• **ECCHO (Electronic Check Clearing House Organization):** An organization of banks that are pursuing ECP. Participants provide electronic prenotifications to one another of large-dollar checks, followed by later presentation of the items.

• **NACS (National Association for Check Safeshipping):** An organization of banks that aims to stop the flow of paper checks completely and clear check payments using special automated clearing house (ACH) formats. NACS represents the "keeper bank model" of check truncation, where the bank of first deposit retains the physical item and passes on only information relevant to the clearing process; the physical item is never returned to the check writer.

• **NCHA (National Clearinghouse Association):** A national organization designed to leverage the local check-clearing-house arrangement on a national scale. NCHA members agree to accept checks from all other members for presentation to paying banks through local clearing house arrangements. Accounting information related to presentations is handed over to a specialized network, the Check Exchange System; net settlement for check exchanges occurs through a special account maintained with the Federal Reserve.

• **Truncation:** Stopping the flow of paper checks completely and converting payment information to electronic form. In a typical truncation program, the physical checks are kept for a time before being microfilmed and destroyed.

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mately the way to go," relates Ercole, who as a former executive with Security Pacific Bank once sat on the board of directors of the Electronic Check Clearing House Organization (ECCHO), a national ECP group.

NCHA, Ercole adds, provides a transition to ECP for banks that aren't ready for or can't afford the technology necessary to make ECP a reality. Looking forward, he suggests, even NCHA will venture into ECP.

ECP advantages. ECP offers an array of clearing advantages: reduced dependency on processing equipment and transportation services, float savings, later deposit deadlines, and earlier return check notifications, to name a few.

"Each time a check goes through a sorter, it presents new opportunities for mishandling, paper jams, and other problems," explains Jay Simmons, vice-president, Citibank (Delaware).

In an ECP environment, the routing and payment information encoded on the magnetic ink character recognition (MICR) line is captured at the bank of

first deposit. That bank transmits the MICR data directly to the paying bank or to an intermediary, such as a correspondent bank, clearing house, or Federal Reserve Bank. In effect, the need for a prime pass run is eliminated when a bank accepts check presentments electronically. That translates into savings.

Transportation savings. Because the most important check information—account numbers and payment amounts—is captured and transmitted early in the collection cycle in the ECP environment, there is no pressing need to transport checks physically to the paying bank.

"ECP diminishes the need for the speedy delivery of checks and therefore saves costs," observes Howard Wentworth, senior vice-president, CoreStates Financial Corp., Philadelphia. ECP provides the ability to link the bank of first deposit with the paying bank overnight, he explains, meeting or exceeding the Reg CC guidelines for check availability.

The paying bank already has

enough information to make a pay/no pay decision about the checks it receives. If the paying bank decides not to honor a particular check, it can alert the collecting bank of this fact before the paper checks are even shipped out, thereby providing the collecting bank with ample opportunity to withhold funds from the depositor of the check.

This reduces risk in the check collection process, particularly in a regulatory environment that requires availability on check deposits before many banks even learn of the imminent return of bad checks.

ECP's early days. "ECP is at the beginning of its evolution," explains William Toner, technology strategist with J.D. Carreker and Associates (JDCA), a Dallas-based consulting firm that provides administrative and software support for ECCHO. But those who champion ECP see great promise in the technology.

Besides ECCHO, which claims 19 banks exchanging check information electronically, there are ECP initiatives now taking shape within the Federal

◆ COVER REPORT/OPERATIONS ◆

Reserve System and most of the check clearinghouses serving major cities.

"This activity will cause two out of three checks by the end of 1993 to be [cleared via] ECP," predicts Denny Carreker, JDCA president.

Sharing resources. Most of the ECP activity in the country is concentrated among large banks. The Fed's ECP work is a notable exception because it serves some of the smallest banks; many of which are located in remote regions such as the Upper Peninsula of Michigan.

Other efforts also are under way to spread the benefits of ECP throughout banking.

J.D. Carreker, for example, is working on a new network configuration that will provide utility support for broad-based ECP. Payment System Network (PSN), as the project is known, is intended to serve as an electronic version of the traditional check-clearing apparatus.

With the involvement of about a dozen bankers, existing IBM network systems, First Tennessee Bank's First Express check-courier service, and the New York Clearing House, JDCA plans to provide a utility function for the ECP-related data communications, transportation, and settlement activities.

"PSN provides a structure where we can increase the number of banks participating in ECP, increase the types of transactions being processed, and increase the volume of transactions being processed," explains Toner. "The whole thing is leverage."

Community banker's view. "If we as community bankers don't find a way to deliver products and services at rock-bottom prices, we're not going to be able to stay independent community banks for very long," warns Susanne Boxer, president and CEO of \$60 million-assets Houghton National Bank, Houghton, Mich.

Boxer sees great promise in ECP. Her bank is one of three participating in an electronic check clearing pilot with the Federal Reserve Bank of Minneapolis, where the banks both send and receive check MICR information electronically.

Including the three banks that both send and receive check presentments, 17 Upper Peninsula banks receive check MICR data electronically from the Minneapolis Fed. If all of those

banks were to participate in the send-receive pilot, Boxer estimates 80% of Houghton's check clearing would be done electronically. That certainly would help contain costs, she notes.

"I don't think you'll see an immediate cost savings, but you'll see cost containment," says Boxer of the trend toward ECP.

Transition to truncation. Boxer has even greater hopes for check truncation. "The paper has got to come out of the system," she maintains. ECP, Boxer suggests, provides a transition step to truncation.

"If we as community bankers don't find a way to deliver products and services at rock-bottom prices, we won't be able to stay independent community banks for long"

—S. Boxer, Houghton Nat'l Bank

Boxer isn't alone in her truncation hopes. The Federal Reserve has been pushing truncation for years. Last year, the Fed joined forces with the National Association for Check Safekeeping (NACS) in a new test of the automated clearing house network to move truncated check data between banks.

To date, participation in the NACS pilot has been meager—two corporations, two payor banks, and ten Federal Reserve offices. The volume of checks truncated in the program reflects that fact: fewer than 100,000 items (all small-dollar rebate checks) were truncated during the first nine months of the program, according to officials at the National Automated Clearing House Association (NACHA), which administers NACS.

The Fed has had somewhat more success with its proprietary truncation efforts. Nearly 12 million checks per month are truncated by 11 Federal Reserve Banks, according to Joanna Frodin, vice-president, Federal Reserve Bank of Philadelphia and check product manager for the Federal Reserve System.

"Truncation is the king pit," says Frodin of the Fed's check-clearing endeavors. "The goal is to stop the paper."

So far, however, most interest in truncation has come from the U.S. Treasury Department and small finan-

cial institutions. Most bankers are uncomfortable forfeiting receipt of physical checks, Frodin notes.

ECP or imaging? What the Fed hopes will stimulate greater interest and a higher comfort level with truncation, Frodin adds, is imaging. In an imaging environment, a bank would receive images of checks drawn on it to aid in decisions (such as the pay/no pay decision or signature verification) in lieu of the actual pieces of paper.

"We're looking for image to break down the barriers to truncation," Frodin explains.

But there is a catch: many bankers remain wary of imaging. Some, for example, feel that imaging requires too much of an up-front investment and not enough of a payback.

"I can get into ECP tomorrow for a couple of hundred thousand dollars," says Jay Simmons of Citibank. All that is needed is new software loaded onto existing hardware, he notes. By contrast, "imaging will cost me millions," he adds, and will require both hardware and software changes.

Even more importantly, the imaging nay-sayers contend, ECP and truncation support the banking industry's overall bent toward electronic payments processes and away from paper.

"Investing in NACS and ECCHO is an evolutionary step to creating a paperless payments system," observes Simmons, who sits on the ECCHO board of directors and also serves as NACS's vice-president. But imaging does not remove paper from the clearing process, he adds. "The two are diametrically opposed."

Despite such assertions, the Fed seems as committed to imaging as it is committed to ECP and truncation.

Some bankers see the Fed predilection as symptomatic of a "managed withdrawal" from the checking business—that the only way the Fed can keep its check-collection prices in line with the cheaper prices that will spring from emerging private-sector clearing arrangements is by reducing its dependency on check-processing equipment and transportation.

But as Frodin sees it, the variety of new clearing techniques and technologies will benefit the industry. "There are so many different needs and so many different niches, that there is no single new approach that is going to dominate tomorrow," she asserts. □

APPROVED	O.G. FIG. Me	
BY	CLASS	SUBCLASS
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FIGURE 1

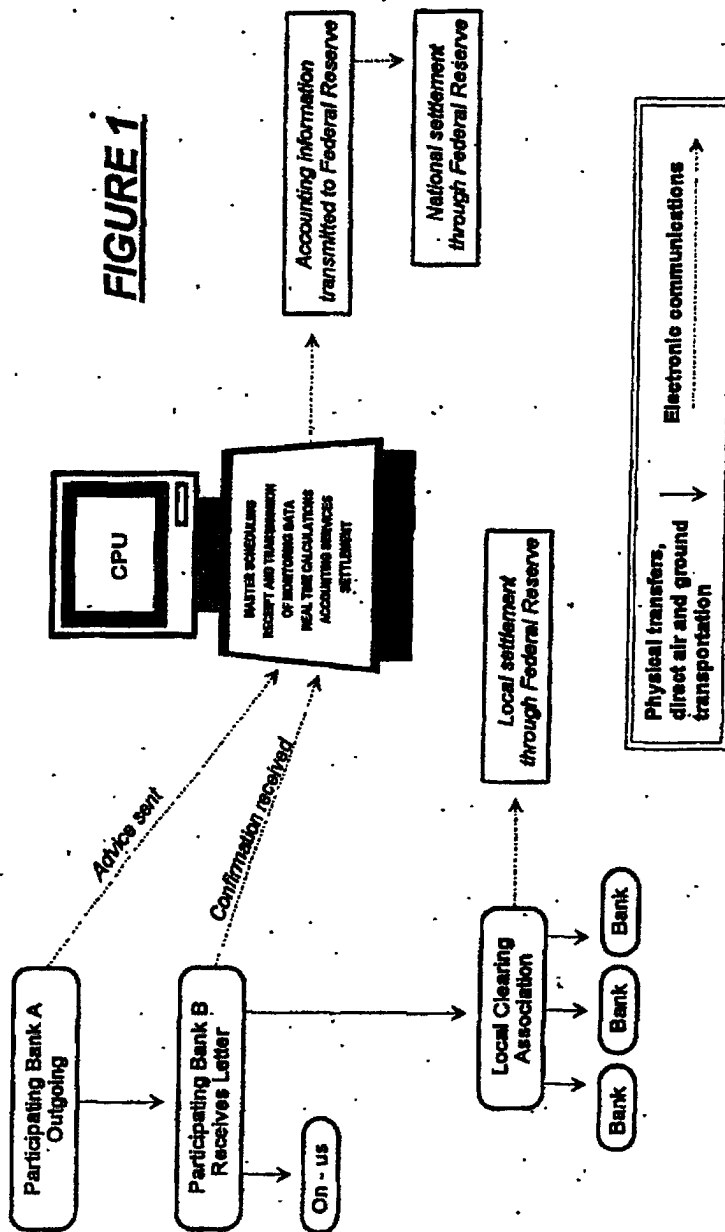


EXHIBIT 5

U.S. Patent No. 5,265,007
Claims asserted: 1, 2, 3, 4, 5, and 6

EXHIBIT E

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
161.	Pre-selected financial institutions each located at a pre-selected site Pre-selected institutions	Financial institutions which have previously been selected to be members of or participants in the central check clearing system or a local clearinghouse. Intrinsic evidence: '007 Patent at 1:44-52; 2:30-37; 2:66-3:7; 3:24-28; 5:13-18; 7-34-38; 10:25 Webster's Encyclopedic Unabridged Dictionary of the English Language, Random House, Inc., p. 1138 (1994) (defining "preselect" as "to select in advance; choose beforehand.") (Exhibit F)	Members of a centralized clearinghouse association, where each member is located in a specific and exclusive geographical region. Col.2 1.66 – col.3 1.3; col.3 1.24-28.	1, 2	Defendants
162.	Regular periodic settlement	Settlement of credit and debit balances between institutions at predetermined time intervals. Intrinsic evidence: '007 Patent, at Abstract; Col. 2:9-16; 2:32-39; 2:47-49; 3:5-11	Settlement occurring at a "predetermined time each day." Col.2 1.35-37; col.3 1.5-10; col.4 1.7-10; Col.6 1.16-20.	1	Defendants
163.	Real-time	The actual time during which something takes place.	The term has its ordinary meaning: occurring at the time of an event. Col.4 1.5-	1, 4	Defendants

DataTreasury Corp. v. Citigroup Inc. et al.

Exhibit E of Joint Claim Construction Chart and Supporting Evidence

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
164.	Central processing unit connected to each institution, central processing unit connected to each of the pre-selected institutions	<p>Intrinsic evidence: '007 Patent, at Col. 2:40; 6:60-64; 7:14-34</p> <p>Extrinsic evidence: <i>Merriam Webster Online Dictionary</i> at http://www.m-w.com/dictionary/realtime (defining "real time" as "the actual time during which something takes place") (Exhibit F)</p>	6.	1, 4	Defendants
		<p>The construed term should be just "central processing unit", which should be defined as "a conventional programmable computer."</p> <p>Intrinsic evidence: '007 Patent, at Claim 4; 9:1-2 ("to a programmed central processing unit"), 9:10 ("a programmed central processing unit"); 1:62-66 (Objects of the Invention "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 banks."); 6:11-16 ("The switch may be an appropriately programmed digital computer having means for receipt and transmission of data as well as further arithmetic and algorithmic means, to reconcile or calculate debits and credits anticipated in an essentially "real time" basis among participating members.")</p>	<p>A single master "conventional programmable computer" that is electronically connected to each participating institution.</p> <p>Fig 1; Col 1 1.62-66; Col.2 1.1-5; "[I]t is the single master CPU that controls the mechanism." Amendment after Final Office Action, p. 8 (05-06-93).</p>		

No.	Claim Term	Plaintiff's Proposed Constructions	Defendant's Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
165.	Value of the instruments transported	The construed phrase should be just "value of the instruments" as that appears several times in Claim 1. The construction should be "the individual or total amount of the financial instruments."	The total dollar amount of the financial instruments being delivered. Col.5, 1.20-22.	1	Defendants
166.	Transport status of the instruments	Information about the status in transit of the instruments. Intrinsic evidence: '007 Patent, at Col. 2:37-39; 4:15-22; 5:60-65; 6:25-27; 8:9-15	Information about shipment, delivery, and receipt of financial instruments sent and received by the pre-selected financial institutions. Col.5 1.60-65; col.6 1.25-27; col. 6 1.60-64; col.2 1.37-39.	1	Defendants
167.	The sending and receipt status	Information about the sending and receipt status of the instruments. Intrinsic evidence: '007 Patent, at Col. 8:9-15	Information about shipment and receiving of financial instruments sent and received by the pre-selected financial institutions. Col.5 1.60-65; col.6 1.25-27; col. 6 1.60-64; col.2 1.37-39.	1	Defendants
168.	The status in transit of the instruments	See proposed construction for "Transport status of the instruments"	Information about transport of financial instruments sent and received by the pre-selected financial institutions.	1	Defendants
169.	According to the reporting of an institution's sending and receiving of the instruments	Based on the information provided by a financial institution about the sending and receiving of the instruments. Intrinsic evidence: '007 Patent, at Col. 6:60-66	Based on the information provided by the financial institutions to the central processing unit.	1	Defendants

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear In '007	Submitting Party
170.	Interrelated with the central processing unit	Implemented as software.		1	AGREED
171.	Final calculation	No construction is necessary. Intrinsic evidence: '007 Patent, at 3:29-54	Calculation once a day by the clearinghouse of debits owing from and credits payable to each of the pre-selected financial institutions. Col. 6 l.16-20.	1	Defendants
172.	Debit and credits	Credits are the amounts owed by a financial institution. Debits are the amounts payable to a financial institution.	Debits – amounts owed or payable by a financial institution Credits – amounts owed or payable to a financial institution	1	Defendants
173.	Occurrence of the regular periodic settlement among the institutions	No construction is necessary.	The specific time each day when settlement of accounts between the members of the clearinghouse takes place.	1	Defendants
174.	Pre-determined local settlement by the institutions in the pre-selected sites with institutions that are not among the number of pre-selected financial institutions	A settlement between a user and non-user of the clearinghouse that occurs at a regular interval. Intrinsic evidence: '007 Patent, at Col. 2:55-61; 3:9-13; 4:52-54; 10:25-28	A specific settlement between a member and specific non-members of the clearinghouse that occurs at a specific time daily. Col.2 l.55-61; Col.4 l.50-55; Col.5 l.26-45; Col.	1	Defendants
175.	Institutions that are not among the number of pre-selected financial institutions	Non-members of the clearinghouse.		1	AGREED
176.	Site locality of each other of the pre-selected institutions	Location of the other member financial institutions.		2	AGREED

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
177.	Site sort category	Grouping by locations of the members.		2	AGREED
178.	Drawn on institutions within the site that are not among the number of pre-selected financial institutions	Financial instruments drawn on non-member financial institutions within a site locality.		3	AGREED
179.	Clearinghouse	Institution for effecting the settlement of accounts between member financial institutions.		4	AGREED
180.	Addressing the central processing unit	Function of establishing communications between the central processing unit and the participants' modem (or the like).		4	AGREED
181.	All participants in the system	All the members of the clearinghouse association.		4	AGREED
182.	Operatively interconnected to	Able to interact functionally with		4	AGREED
183.	May be determined and monitored on a continuous basis in real time	No construction necessary.	Able to be obtained and kept track of in real time. Col.4 14-7; Col.4 1.50-52.	4	Defendants
184.	Physical transport	Air or ground transportation.		4	AGREED
185.	Predetermined time cycle	A schedule of events determined before the event occurs.		4	AGREED
186.	Determining the occurrence of a final settlement by a clearinghouse participant	Establishing that a clearinghouse participant has had its debits and credits calculated and recorded.		4	AGREED
187.	Pre-determined time	A single time of day determined before those events occur.		4	AGREED
188.	Until after a time that certain pre-determined local settlements in the	Until after local settlements by the members are completed.		4	AGREED

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
189.	localities, by the participants in the localities, are completed settlements	Local settlements that are determined beforehand. Intrinsic evidence: '007 Patent, at Col. 3:9-13; 4:52-54	Settlements at each specific region and among specific participants in each region. Col.4.1.15-40; col.5.1.25-35; col.6.1.40-50.	4	Defendants
190.	Participants in the localities	Extrinsic evidence: Webster's Encyclopedic Unabridged Dictionary of the English Language, Random House, Inc., p. 744 (1994) (defining "predetermine" as "to settle or decide in advance") (Exhibit F)	Members of the local clearinghouse, which can be but need not also be members of the national clearinghouse.	4	AGREED
191.	Different financial institutions in the locality which are not participants in the clearinghouse	Members of the local clearinghouse, which are not members of the national clearinghouse. Intrinsic evidence: '007 Patent, at 5:17-45; 6:29-33; 4:25-40	Non-member banks of the clearing house in the locality.	3, 6	Defendants
Terms one or both parties contend should be construed as "means-plus-function" terms					
192.	Means within each of the pre-selected institutions... for sending and receiving the	Function: sending and receiving the instruments. Corresponding Structure: Air or ground transportation and a pre-selected institution's physical facility (i.e., bank, member bank, Participating Bank A/B, sending/receiving		1	AGREED

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear In '007	Submitting Party
193.	Means for physically transporting the instruments (from an institution at one site to each other of the institutions at the other sites)	bank) Function: physically transporting the instruments. Corresponding Structure: Air or ground transportation Intrinsic evidence: '007 Patent, at Col 1:66-67; 4:15-20; 5:61-63 ("Physical transport of the checks may be by any means provided that scheduling requirements of the system are maintained.").	This is a means-plus-function element The function is physically transporting the instruments from an institution at one site to each other of the institutions at the other sites. The specification does not disclose a corresponding structure. For example, the specification just states that: "Physical transport of the checks may be by any means provided that scheduling requirements of the system are maintained." (col.5 1:60-63).	1	Plaintiff (Defendants)
194.	Means for physically accepting the instruments (transported from the other institutions)	Function: physically accepting the instruments. Corresponding Structure: A pre-selected institution's physical facility (i.e., bank, member bank, receiving bank, Participating Bank B), and its relationship with air or ground transportation. [Fig. 1 (solid directional lines); 1:66-2:1; 4:15-22] Intrinsic evidence: '007 Patent, at Fig. 1 (solid directional lines); Col. 1:66-2:1; 4:15-20; 5:61-63 ("Physical transport of the checks may be by any means provided that scheduling requirements of the system are maintained.").	This is means-plus-function element. The function is physically accepting the instruments transported from the other institutions. There is no structure disclosed for this function. "Immediately upon physical receipt of the checks, the New York participant enters information about the receipt... of checks into the switch." (col.6 1:25-27)	1	Plaintiff (Defendants)

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear In '007	Submitting Party
195.	<p>Means within each of the pre-selected institutions... 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 value of the instruments transported, and (b) the transport status of the instruments with respect to their having been (i) sent and (ii) received)</p>	<p>Function: sending to and receiving from a central processing unit.</p> <p>Corresponding Structure: Electronic communications links [Fig. 1], which may include conventional telephone links by modem connections and the like [6:22-24]; and software [6:20].</p> <p>Intrinsic evidence: '007 Patent, at Fig. 1, Col. 6:22-24</p>	<p>This is a means-plus-function element.</p> <p>The function is 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 value of the instruments transported, and (b) the transport status of the instruments with respect to their having been (i) sent and (ii) received.</p> <p>The specification does not recite any structures that may be used within a member institution to receive information from the central CPU.</p>	1	Plaintiff (Defendants)
196.	<p>Means within each of the pre-selected institutions... for receiving from the central processing unit a calculated 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</p>	<p>Function: receiving from the central processing unit a calculated value.</p> <p>Corresponding Structure: accounting system [3:35-39]; related software [6:20-22]; electronic communications links [Fig. 1]</p> <p>Intrinsic evidence: '007 Patent, at Col. 3:35-39, 5:25, 4:50, 6:20-22; Fig. 1</p>	<p>This is a means-plus-function element.</p> <p>The function is receiving from the central processing unit a calculated 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.</p> <p>The specification does not recite any structures within a member institution that receive information from the central CPU.</p>	1	Plaintiff (Defendants)

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party	
197.	instruments sent and received)	<p>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)</p>	<p>Function: continuous monitoring by the central processing unit (CPU) on a real time basis as to information sent by each institution connected to the central processing unit.</p> <p>Corresponding Structure: A conventional programmable computer or central processing unit [1:62-65; Fig. 1 (CPU)], electronic communications links [Fig. 1], which may include conventional telephone links by modem connections and the like [6:22-24], and related software.</p> <p>Intrinsic evidence: '007 Patent, at Fig. 1; Col. 1:62-65; 6:22-24</p>	<p>This is a means-plus-function element.</p> <p>The function is 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.</p>	1	Plaintiff (Defendants)
198.	Means for calculating debits and credits... (as monitored in on a real time basis from information reported by the institutions)	<p>Function: calculating debits and credits among the participating members.</p> <p>Corresponding Structure: Software [6:20-22] on a conventional programmable computer or central processing unit [1:62-65; Fig. 1 (CPU)]</p>	<p>This is a means-plus-function element.</p> <p>The function is calculating debits and credits... as monitored in on a real time basis from information reported by the institutions.</p> <p>The structure may be undisclosed software</p>	4	Plaintiff (Defendants)	

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
199.	Means for sending to each institution the information monitored (with respect to the instruments sent to an institution and the value of such instruments)	<p>Intrinsic evidence: '007 Patent, Fig. 1; Col. 1:62-65; 6:20-22</p> <p><u>Function:</u> sending to each institution the information monitored.</p> <p><u>Corresponding Structure:</u> Electronic communications links [Fig. 1], which may include conventional telephone links by modem connections and the like [6:22-24]</p> <p>Intrinsic evidence: '007 Patent, at Fig. 1; Col. 6:22-24</p>	<p>for calculating debits and credits being executed by a "central accounting means" such as a "conventional programmable computer or other central processing unit for the computation of the settlements among participant banks." Col.1 1:62-66; col.2 1:39-45.</p> <p>This is a means-plus-function element.</p> <p>The function is: sending to each institution the information monitored with respect to the instruments sent to an institution and the value of such instruments</p> <p>The specification does not describe any structure sufficiently linked to the function.</p>	1	Plaintiff (Defendants)
200.	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)	<p><u>Function:</u> cycling</p> <p><u>Corresponding structure:</u> Rules and parameters regarding time scheduling where such rules and schedules are interrelated with the central processing unit (CPU).</p> <p>Intrinsic evidence: '007 Patent, at Col. 3:10-25; 6:60-64; 10:7-16; 2:55-66; 3:9-16; 3:39-42; 5:35-39; 6:9-23</p>	<p>This is a means-plus-function element.</p> <p>The functions are "controlling the physical transport of the financial instruments among the institutions" and "controlling the means for calculating such that a financial calculation...does not occur until pre-determined local settlements...are completed."</p> <p>The specification does not recite any corresponding structures. In response to an Office Action, the Applicant stated that "[c]ycling means is an appropriate term to</p>	1	Plaintiff (Defendants)

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
201.	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 category to institutions at sites within the site sort categories)	<p>Function: sorting instruments</p> <p>Corresponding Structure: Sorters [7:3] or sort machines [4:46-7] at the receiving bank</p> <p>Intrinsic evidence: '007 Patent, at Col. 7:30; 4:46-47</p>	<p>use in describing the settlement mechanism because a clearinghouse mechanism must function on a regular and periodic, or cyclical basis." Amendment, p:11 (12-08-92). (emphasis added). "[T]he 'cycling means' is necessary to operate the clearinghouse mechanism on a regular periodic basis 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." <i>Id.</i> at 13. However, the term "cycling means" is not described in the specification and no structure corresponding to the prosecution arguments is disclosed.</p> <p>This is a means-plus-function element.</p> <p>The function is</p> <p>(1) sorting instruments by site locality of each other of the pre-selected institutions and</p> <p>(2) sending the instruments sorted by site category to institutions at sites within the site sort categories.</p> <p>The structure that performs the first function is a sorter. Col.3 1:41-48. However, the specification does not disclose a structure linked to the second function.</p>	2	Plaintiff (Defendants)
202.	Means at each of	(1)	This is a means-plus-function element.	4	Plaintiff

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
	<p>participants for (1) 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)</p>	<p><u>Function:</u> sending and receiving financial instruments to be cleared</p> <p><u>Corresponding Structure:</u> Air or ground transportation and a pre-selected institution's physical facility (i.e., bank, member bank, Participating Bank A/B, sending/receiving bank)</p> <p>(2) <u>Function:</u> 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</p> <p><u>Corresponding Structure:</u> Electronic communications links [Fig. 1], which may include conventional telephone links by modem connections and the like [6:22-24]</p> <p>(3) <u>Function:</u> addressing the central processing unit by which a participant may determine in real time the information received by the processing unit</p> <p><u>Corresponding Structure:</u> Electronic communications links [Fig. 1], which may include conventional telephone links by modem connections and the like [6:22-24]</p>	<p>The functions are:</p> <ol style="list-style-type: none"> 1) sending and receiving financial instruments to be cleared; and 2) 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) 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 <p>It is unclear from the claim language if the structure corresponding to these functions is one structure or a combination of structures.</p> <p>The only structure linked to function (1) is air and ground transportation vehicles. "Physical delivery of items would be accomplished through air and ground transportation." (col. 1:66-67). "Physical transport of the checks may be by any means provided that scheduling requirements of the system are maintained." (col. 5:160-63).</p> <p>The specification does not expressly</p>		(Defendants)

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear in '007	Submitting Party
203.	Means for calculating debits and credits...	<p>Intrinsic evidence: '007 Patent, at Col. 6:22-24</p> <p>Function: calculating debits and credits among the participating members.</p> <p>Corresponding Structure: Software [6:20-22] on a conventional programmable computer or central processing unit [1:62-65; Fig. 1 (CPU)]</p> <p>Intrinsic evidence: '007 Patent, at Fig. 1; Col. 6:20-22; 1:62-65</p>	<p>disclose any structure sufficiently linked to either functions (2) or (3).</p> <p>This is a means-plus-function element.</p> <p>The function is "calculating debits and credits."</p> <p>The structure may be undisclosed software for calculating debits and credits being executed by a "central accounting means" such as a "conventional programmable computer or other central processing unit for the computation of the settlements among participant banks." Col.1 1:62-66; col.2 1:39-45.</p>	4	Parties
204.	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)	<p>Function: receiving and recording a participant's report of the value and transit status.</p> <p>Corresponding Structure: Software [6:20-22] associated with an accounting system running on the central processing unit (CPU).</p> <p>Intrinsic evidence: '007 Patent, at Col. 6:20-22</p>	<p>This is a means-plus-function element.</p> <p>The function is "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."</p> <p>The specification does not sufficiently describe the structure linked to the function.</p>	4	Plaintiff (Defendants)
205.	Means for monitoring on a real time as reported basis	<p>Function: monitoring on a real time as reported basis.</p> <p>Corresponding Structure: Software [6:20-</p>	<p>This is a means-plus-function element.</p> <p>The function is "monitoring on a real time as reported basis."</p>	4	Parties

No.	Claim Term	Plaintiff's Proposed Constructions	Defendants' Proposed Constructions	Claims Where Terms Appear In '007	Submitting Party
206.	Time control for physical transport between and among the participants	<p>221 associated with a conventional programmable computer or central processing unit [1:62-65; Fig. 1 (CPU)] operably interconnected with software associated with the accounting system on the CPU.</p> <p>Intrinsic evidence: '007 Patent, at Col. 20-22; 1:62-65; Fig. 1</p> <p>Predetermined time schedule.</p> <p>Intrinsic evidence: '007 Patent, at Col. 2:55-58 ("In the system of the invention, physical transport of financial instruments between and among the members is controlled by a predetermined time schedule...").</p> <p>Extrinsic evidence: Webster's Encyclopedic Unabridged Dictionary of the English Language, Random House, Inc., p. 744 (1994) (defining "predetermine" as "to settle or decide in advance"); (Exhibit F)</p>	<p>The structure may be undisclosed software adapted for the system to perform the recited function and being processed by a "switch" or "appropriately programmed digital computer." Col.6:19-23; Col.7:11-14-20; Col.11:62-66; col.21:39-45.</p> <p>This is a means-plus-function term.</p> <p>The function is "determining the time of physical transport of financial instruments between and among the participants."</p> <p>The specification does not disclose a time control or any structures linked to the functions listed above. In an Office Action, Applicant stated, "[w]hile 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." Amendment, p. 12 (12/8/92).</p>	4	Defendants

EXHIBIT 6

THE OXFORD ENGLISH DICTIONARY

SECOND EDITION

Prepared by

J. A. SIMPSON *and* E. S. C. WEINER

VOLUME XIII

Quemadero—Roaver

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of. [the patients] received reagent grade zinc sulfate 90 mg daily, and three received reagent grade ferrous sulfate 1 gm orally daily. 1973 *Jrnl. Amer. Chem. Soc.* XCIV. 1913:1 All reagents and solvents used were reagent grade and, unless noted otherwise, were used without further purification. 1908 *Practitioner* Mar. 410 A pea-sized piece being rubbed up with 2 c.c. of water, and the reagent-paper dipped into this.

†**re'aggravate**, v. Obs. rare. [RE- 5a, after med.L. *reaggravare* (1501 in Du C.), It. *raggravare* (Florio), F. *réaggraver* (15th c.): cf. next.] *trans.* To make still heavier.

1611 COTGR., *Reaggraver*, *reaggrauite*; reinforce, renew. 1626 C. POTTER tr. *Sarpi's Hist. Quarrels* 72 Reseruing to Himselfe and his successors power to aggravate and reaggrauate the censures and penalties against them.

reaggrava'tion. Eccl. [ad. med.L. *reaggrava'tio*; cf. obs. F. *réaggrava'tion* (15th c.); the usual word is *réaggrave*]. See prec. and AGGRAVATION 3.] The second warning given to a person before final excommunication.

1611 COTGR., *Reaggrava'tion*, a reaggrava'tion; and (particularly) the last, and most dreadful excommunication of offenders. 1727-41 CHAMBERS *Cycl. s.v.*, Before they proceed to fumatinate the last excommunication, they publish an aggravation, and a re-aggravation. 1864 [see AGGRAVATION 3].

re'aggregate, v. [RE- 5a.] a. *trans.* To collect or bring together again. b. *intr.* To come together again. Hence *re'aggregated ppl. a.*; *reaggregation*.

1849 MURCHISON *Siluria* xiv. 347 Simply a re-aggregated granite. 1862 G. P. SCROPE *Volcanos* 45 A proportionate diminution of temperature... re-aggregates them in a solid mass. 1882 SPENCER *Princ. Sociol., Pol. Instit.* 243 The minglings of peoples and institutions, the breakings up and re-aggregations... destroy the continuity of normal processes. 1962 H. BLOHMENDEL et al. in A. Pirie *Lens Metabolism* 300 The subunits... re-aggregate after removal of urea.

reagin (ri'eidʒɪn). Immunol. [a. G. *reagin*, f. *reag-ieren* to react + *-in* -INE^s.] a. The complement-fixing substance in the blood of persons with syphilis which is responsible for the positive response to the Wassermann reaction.

1911 R. W. MATSON tr. A. Wolff-Eisner's *Clin. Immunity & Serodiagnosis* iii. 33 To avoid errors, it is... best to use the term 'reactive substances' (reagins) rather than 'antibodies', since the latter implies a neutralization in the sense of an antitoxin. 1915 J. E. R. McDONAGH *Biol. & Treatm. Venereal Dis.* x. 71 Owing... to the fact that a positive Wassermann reaction may be obtained in conditions other than syphilitic ones, the reaction ceases to be a specific reaction. Therefore the third factor ought not to be called an antibody, since it is in no wise specific, hence it is best called reacting substance, or Reagin. 1937 H. EAGLE *Lab. Diagnosis of Syphilis* i. 24 There is reason to believe that Wassermann's first theory was correct, and that the active component of syphilitic serum, so-called reagin, may well be an antibody to *Spirochaeta pallida* despite its reactivity with normal tissue lipoids. 1942 *Jrnl. Lab. & Clin. Med.* XXVII. 720 It seems controversial as to whether reagin is an antibody to lipid happens of the host... or an antibody to the spirochete. 1976 A. E. WILKINSON in *Caterall & Nicol Sexually Transmitted Dis.* 215 Although the function of reagin is still uncertain, its level seems to be roughly related to the amount of tissue reaction by the host, rising rapidly with increasing numbers of treponemes in early syphilis and later falling as the number of organisms declines with developing immunity.

b. The antibody which is involved in allergic reactions, causing the release of histamine and similar agents when it combines with antigen in tissue and capable of producing sensitivity to the antigen when introduced into the skin of a normal individual.

1925 [see ATOPY] 1963 *Advances in Immunol.* III. 18: Reagin still represents a nebulous concept to many immunologists, some doubting the legitimacy of its classification as an antibody. 1969 R. S. WEISER et al. *Fund. Immunol.* xv. 163 The antibodies responsible for P-K type sensitivities, the so-called 'reagins' or P-K antibodies, have long been a mystery. 1977 *Nature* 16 June 618:1 Allergic diseases such as hay fever, extrinsic asthma, drug hypersensitivities and some forms of urticaria are mediated by allergen-specific antibodies of the IgE class, known also as reagins.

Hence *reaginic a.*, of, pertaining to, or being (a) reagin.

1931 A. F. COCA *Asthma & Hay Fever in Theory & Pract.* I. xvii. 332 Bona fide reaginic reactions are indicative of past, present or potential sensitivities in the atopic individual. 1945 *Vel. Rec.* LVIII. 339:2 (*heading*) Reaginic allergy in cattle. 1975 *Nature* 6 Feb. 475:1 In the rat, reaginic antibodies were reported and their possible significance in *Schistosoma mansoni* infection considered. 1977 A. M. DENMAN in *Hollborow & Reeve's Immunol. in Med.* x. 295 IgE constitutes the major class of reaginic antibody but it seems likely that some IgG... antibodies also contribute.

re'agitate, v. [RE- 5a.] To agitate again.

1813 T. BUSBY *Lucretius* II. iv. *Comm.* p. xxiv. Certain minute moveable bones... provided to re-agitate the air.

†**reagnize**, v. Obs. -¹ [RE- 5a.] *trans.* To recognize.

1684 H. MORE *Annot. Glanvill's Lux Orient* 30 They will... remember their former Paradiisical state upon its recovery, and reagnize their ancient home.

reagre, v. Obs. -¹ [f. RE- 5a + AGREE v. 4.] *trans.* To reconcile, make up again.

1609 DANIEL Cfu. *Wars* vii. exiv. Fain to see that glorious holiday of Union which this discord re-agreed.

reaisun, obs. f. REASON.

reak, (?) var. of RAKE *sb.*³ and *v.*¹

reak(e, obs. ff. REEK sb. and v.

reake, obs. f. RECK v.; (?) obs. var. of REACH v.

reaklesse, obs. var. of RECKLESS.

reakn-, obs. Sc. f. RECKON v.

†**reaks**, *sb. pl.* Obs. Also 6-7 reakes, 7 reeks, reax; and *sing. 9 Sc. reik*. [Of obscure origin: cf. FREAK. The precise relationship to REX is not clear; the evidence is not decisive for the view that rex is the original form.] Pranks, wanton or riotous tricks or practices. Chiefly in phr. to *keep or play reaks* (very common in 17th c.).

1575 GASCOIGNE *Flowers, Looks of Lower forsaken Wks.* 15 Such reakes the rage of loue in the head wrought. 1586 D. ROWLAND *Lazarillo* ii. (1672) Ui, The owner of the House, where these Reakes were Played. 1596 NASH *Saffron Walden* 95 The olde reakes hee kept with the wenches in Queenes Colledge Lane. 1633 HEYWOOD *Eng. Trav.* ii. Wks. 1874 IV. 25 They may be rather called Reakes then Raulls. 1699 R. L'ESTRANGE *Fables* (1694) 475 Throwing books at one another's heads and playing such Reaks as if Hell were broke loose. 1818 SCOTT *Rob Roy* xxvi, Mony a daft rick he has played. *Comb.* 1811 COTGR., *Ribleur*, a disorderlie rouer... outrageous reakes-player.

real ('ri:əl, 're:əl), *sb.*¹ Also 7 reall. [Sp. *real*, sb. use of *real adj.*, royal; -L. *rēgāl-em*: see REAL a¹, and RIAL *sb.*]

1. A small silver coin and money of account formerly in use in Spain and Spanish-speaking countries. a. The old Spanish *real de plata* (largely circulated in the United States up to c. 1850, and in Mexico until 1897) = an eighth of a dollar (64¢ = 1900). b. The former Spanish monetary unit, *real (de) vellon* (not current as a coin) = a quarter of a peseta.

The *real de plata* was formerly known in the northern U.S. by the name of Mexican or Spanish shilling, in the south by that of LEVY *sb.*³ See also BIT *sb.*³ 8b.

PURCHASE *Piercing* viii. x. (1614) 705 Every Indian payeth tribute to the King [of Spain] twelve Reals of Plate. 1662 J. DAVIES tr. *Olearius' Voy. Ambass.* 97 The Muscovites... carry them [Rixdollers] to the Mint, as they do also Spanish Reals. 1760 *Ann. Reg.* 80 All they owed to the crown... which does not amount to less than sixty millions of reals. 1798 MALTHUS *Popul.* (1878) 359 The highest price is 48 reals vellon. 1850 B. TAYLOR *Eldorado* II. xiii. 84 The money... was paid to me in quarter-dollars, reals, and medios, which it took me more than an hour to count.

† 2. *real of eight* = *piece of eight* (EIGHT 2 d). Obs.

1612 SHELTON *Quix.* I. i. ii. 14 It being all one to me to be paid my Money in 8 single Reals, or to be paid the same in one Real of eight. 1628 DIGBY *Voy. Medit.* 38, 4 French vessels, whereof one... had still a hundred thousand reals of eight aboard her. 1818 JAS. MILL *Brit. India* I. i. ii. 31 The prize money, which was estimated at 100,000 and 240,000 reals of eight.

† **real a.**¹ (and *sb.*²) Obs. Also 4-5 reale, 4, 6-7 reall; pl. 5 *Sc. reaws*. [a. OF. *real* (12th c.) = Prov. *real*, *reial*, Sp. *par. real*, It. *reale*: -L. *rēgāl-em* REAL. As a variant of RIAL and ROYAL, the form chiefly occurs in MSS. written about 1400.]

A. *adj.* Royal, real, kingly.

13... *Gay Wars*, (A.) 379 A real pauloun he ber seye. 1350 *Will. Palerne* 1597 Al pat real aray reken schold man neur. 1397 *Rolls of Parlt.* III. 379:1, I amonges other restreyned my Lord of his freedom, and toke upon me... Power Reall. 1425 WYNTOUN *Cron.* III. iii. 560 Brute... bygydd in his land a towne, Yhit realle [and] off gret renouwe. 1460 CAPGRAVE *Chron.* (Rolls) 197 The queen held a real Cristmisse afair at Walingford. 1577 HELLOWES *Guevara's Chron.* 109 He edified the real palace named Neptunus. 1602 MARSTON *Ant. & Mel.* II. Wks. 1856 I. 23 Then whome I knowe not a more... pretious, reall, magnanitious, bountious.

B. *sb.*² A royal person. rare.

1399 LANGL. *Rich. Redetes* I. 91 Reffusinge the reule of reales kynde. *Ibid.* III. 301 Whanne reales remeveth... And carieth ouere contre the comunes dwelthe. 1425 WYNTOUN *Cron.* VIII. i. 105 Gyve any male Of Reaws might fundyn be Worth to have that realte.

real ('ri:əl), *a.*², *adv.*², and *sb.*² Also 5-7 reall. [a. OF. *real*, *reel* (13th c. in Godef.), or ad. late L. *realis*, f. *rēs* thing, etc. + -AL¹.]

The precise sense is uncertain in the following early instances of the words: -1440 *Promp. Parv.* 424:2 *Real*, *reals*. 1570 LEVIN *Manly*, 135:2 *Real*, *realis*. 1598 MARSTON *Sec. Villanie* To iudic, Versers 160 Some of his new-minted Epithets (as *Real*, *Intrinsic*, *Delphicke*).

A. *adj.* I. 1. a. Having an objective existence; actually existing as a thing.

1601 SHAKS. *Ant. Wall* v. iii. 307 Is there no exorcist Beguiles the true Office of mine eyes? Is't real that I see? 1651 HOBBS *Leviath.* II. xxiv. 210 That some such apparitions were not Imaginary, but Reall. 1667 MILTON

P.L. viii. 310 Whereat I wak'd, and found Before mine Eyes all real, as the dream Had livedly shadowed. 1821 SHELLEY *Prometh. Unb.* I. 748 But from these create he can Forms more real than living man. 1859 PARKINSON *Optics* (1866) 130 A real visible object and its optical image differ in this respect.

b. In *Philosophy* applied to whatever is regarded as having an existence in fact and not merely in appearance, thought, or language, or as having an absolute and necessary, in contrast to a merely contingent, existence.

1701 NORRIS *Ideal World* I. iii. 150 An Hircoceruus or any other Fictitious Being is true and real with respect to the Simple Essences or Natures. 1711 SHAFTESB. *Charac.* (1737) II. iii. i. 369 Thought we own pre-eminence, and confess the reallest of Beings. 1797 *Encycl. Brit.* (ed. 3) XVIII. 79:1 Numberless absurdities, such as... forms or sensible qualities are real things independent of their subject and the sentient beings who perceive them. 1843 MILL *Logic* I. vi. 83 He [Locke] admitted real essences, or essences of individual objects, which he supposed to be the causes of the sensible properties of those objects. 1857 WHIEWELL *Hist. Induct. Sc.* (ed. 3) I. 343 The perfections are unquestionably real existences. 1893 BRADLEY *Appearance & Reality* xvii. (1897) 552 The more that anything is spiritual, so much the more is it veritably real.

c. *real money*: (a) current coin or cash (esp. as opposed to imaginary money or money of account).

1685 PETTY *Will* p. v. An estate of about 1300l. in ready and real money. 1849 FREESE *Comm. Class.-bk.* 71 Real monies are coins of any kind of metal, made current by the authority of the state.

(b) *colloq.* A large sum of money.

1918 R. W. LARDNER *Treat'em Rough* 120, I could go out and pitch baseball and make real money. 1939 A. HUXLEY *After Many Summers* I. iv. 46, I did some business this morning... Might make a lot of money. *Real money*. 1964 L. DEIGHTON *Funeral in Berlin* iii. 21 'Whom do you feel like?' I liked that 'whom'—you've got to pay real money these days to get a secretary that could say that.

(c) *colloq.* The coinage or currency in which one habitually reckons, freq. as opp. to foreign currency.

1973 L. MEYNELL *Thirteen Trumpeters* iv. 50 So I'm paying one thousand seven hundred and ten lire for my Pimms?... What's it mean in real money? 1977 *Vole* No. 2. 17:2 Just before the demise of real money and the introduction of decimal coinage, the officials of Gloucester Shoveha's penny League invested £10 in old-style halfpennies. 1977 *Zigzag* Mar. 7:1 They charged me three hundred francs. Well, that's... quite a lot in real money.

d. *Math.* Of quantities. (Opposed to IMAGINARY I.C., or IMPOSSIBLE 2.)

1727-41 CHAMBERS *Cycl. s.v. Root*, If the value of x be positive, i.e. if x be a positive quantity... the root (of an equation) is called a real or true root. 1841 *Penny Cycl.* XX. 150:2 Here a and b are meant to be real algebraical quantities, that is, reducible to positive or negative whole numbers or fractions. 1875 *Encycl. Brit.* I. 544:2 Every quadratic equation has always two roots, real or imaginary. 1910 *Ibid.* I. 613:1 The development of the theory of equations leads to the amplification of real numbers, rational and irrational, positive and negative, by imaginary and complex numbers. 1952 S. C. KLEENE *Introd. Metamath.* I. 6 That there are infinite sets considered in mathematics which cannot be enumerated was shown by Cantor's famous 'diagonal method'. The set of the real numbers is non-enumerable. 1965 PATTERSON & RUTHERFORD *Elem. Abstract Algebra* iii. 85 The real number a is called the real part of the complex number (a, b) and the real number b is called the imaginary part. 1972 S. W. P. STEEN *Math. Logic* iii. 198 Having defined the integers we can then define rational numbers as triplets of integers, then real numbers as Dedekind Sections of rational numbers and lastly complex numbers as ordered pairs of real numbers.

e. *Optics.* (See quot.)

1859 PARKINSON *Optics* (1866) 130 If an image consist of points through which the light actually passes it is called *real*;—in other cases virtual. Hence a screen placed in the position of an image will receive illumination only when the image is real.

f. *real time*, the actual time during which a process or event occurs, esp. one analysed by a computer, in contrast to time subsequent to it when computer processing may be done, a recording replayed, or the like.

1953 *Math. Tables & Other Aids to Computation* VII. 73 With the advent of large-scale high-speed digital computers, there arises the question of their possible use in the solution of problems in 'real time', i.e., in conjunction with instruments receiving and responding to stimuli from the external environment. The criteria for satisfactory operation in such real-time service are different from those generally encountered. 1964 *Listener* 19 Nov. 784:1 A higher speed in computers means that their complexity can increase very rapidly, too, and that they can more easily engage in activities in what we call 'real time'. That is to say, they can calculate at the actual speed of the events taking place. 1968 *Times* 10 Dec. 6:8 The data gathered by the telescopes are stored on board the satellite by magnetic tapes and discs... The Smithsonian experiment can also be used in real time, transmitting information as it gathers it. 1990 *Nature* 20 June 111:6 The data are telemeasured to ground-based stations which record the information on magnetic tape and provide a digital print-out in real time. 1973 *Sci. Amer.* May 115:2 It is wrong to detail a suspense plot, even though we all recall from real time how *Apollo* 13 limped back safely. 1973 *Nature* 12 Oct. 294:1 As we are working in scientific 'real time', we have to ask at what stage the work will be when filming is in progress. 1979 R. HAWKEY *Side-Effect* xi. 83 The Real Time was three hundred milliseconds, but it was shot in slow motion.

attrib. 1953 [see above]. 1960 *N. Y. Times* 17 July 13/4 As an experiment, Air Force and Weather Bureau meteorologists attempted to use the pictures to make 'real time' forecasts of the weather—forecasts fresh enough to be

useful. 1968 *Times* 1 Nov. 23/6 Computers have been slow to conquer the real-time control of industrial processes and traffic flows. 1970 O. DOPPING *Computers & Data Processing* vi. 96 An example of a real-time process is a cheque account system in a bank where all transactions, e.g. withdrawals, are reported to the computer before they are finished. 1972 *Guardian* 9 Feb. 3/8 We do think we know how to develop satellites with a near real-time (instantaneous) capability. 1975 *Offshore Engineer* Sept. 52/2 Seals & Storm is also showing a wave data processing unit, which will give virtually real-time treatment of data from wave buoys. 1977 *Navy News* June 44 (Adv.). To undertake training of our customers' engineers/programmers/technicians on all aspects of software applicable to real-time radar systems.

2. a. Actually existing or present as a state or quality of things; having a foundation in fact; actually occurring or happening. *Phr.* *real life, real world* (passing into senses 3 and 4). Also *attrib.*

1597 SHAKS. *Lover's Compl.* 114 His real habitude gave life and grace To appertainings and to ornament. Accomplished in himself, not in his case. 1662 STILLINGFL. *Orig. Sacr.* iii. ii. 57 Time . . . denotes nothing real in its self existing . . . and so can argue nothing as to the real existence of things from all eternities. 1689 *Frison To Chas. Montague* 4 He can imagine pleasures find. To combat against real cases. 1729 BURLER *Serm. Hom.* Nat. ii. Wks. 1874 II. 18 Our inward feelings, and the perceptions we receive from our external senses, are equally real. 1771 T. JEFFERSON *Let.* 3 Aug. in Koch & Peden *Life & Selected Writings* (1944) viii. 358 Considering history as a moral exercise, her lessons would be too infrequent if confined to real life. 1794 PALEY *Evid.* iii. ii. (1817) 288 The malady was real, the cure was real, whether the popular explication of the cause was well founded or not. 1801 M. EDGEMOND *Belinda* I. iii. 70 Nothing is more unlike a novel than real life. 1816 J. WILSON *City of Plague* iii. iii. 122 More terrible the sights and sounds we know'd disastrous sky Than all the real terrors of the Plague. 1836 *DICKENS Pickwick*. (1837) v. 44 A curious manuscript . . . curious as a leaf from the romance of real life. 1838 J. S. MILL in *Westm. Rev.* XXXI. 28 The writers and readers . . . in France have . . . a thirst for something which shall address itself to their real-life feelings. 1852 MRS. JAMESON *Leg. Madonna* Intro. 36 The Caracci school . . . combined . . . the study of the antique with the observation of real life. 1876 C. M. YONGE *Womanhood* v. 34 Insolence to a governess is an old stock complaint. In real life, I never heard of it from anyone by birth and breeding a lady. 1879 M. ARNOLD *Irish Catho.* Ess. 115 From Christianity a being real source of cure, for a real bondage and misery. 1884 T. Lotze's *Logic* iii. ii. (1888) II. 208 We call . . . an event real which occurs or has occurred, in contradiction to that which does not occur. 1909 *Daily Chron.* 16 Apr. 3/5 Jocelyn Johnstone . . . showed . . . humour in her sketches of . . . real-life scenes. 1923 C. D. BROAD *Sci. Thought* xiii. 536 Now, in real life, there are no examples of pure creation. 1937 'G. ORWELL' *Road to Wigan Pier* ix. 182 One could . . . give everything away, change one's name and start out with no money. . . . But in real life nobody ever does that kind of thing. 1957 P. SUPPES *Intro. Logic* xii. 286 Textbook problems (as opposed to real-life problems). 1963 *Amer. Spectator* XXV. 206 The instances in which its selection depends on real world context. 1966 *Litester* 19 May 72/7 The Vice Chancellor of Lancaster University strongly believes 'that the university must keep contact with the real world outside'. May I take this opportunity to ask: (a) what is real about the real world? (b) why it is always outside? 1977 *National Observer* (U.S.) 15 Jan. 13/1 The roles each of us plays on the revolving stage of the real world have been well described. 1978 P. MARSH et al. *Rules of Disorder* ii. 33 In the perception of our non-academic pupils, school is . . . a waste of time . . . not . . . a part of their 'real lives'.

b. *real presence*, the actual presence of Christ's body and blood in the sacrament of the Eucharist.

The precise sense attached to *real* depends on the belief held as to the nature or mode of the presence. In the Roman Catholic and Lutheran churches it implies the presence (by transubstantiation or consubstantiation) of the actual body and blood of Christ; by the Church of England it is held that the body and blood are present 'only after an heavenly and spiritual manner'.

1559 FECKNAM in *Strype Ann. Ref.* I. App. ix. (1709) 25 *Dog's Dinner*. . . and most constantly affirm . . . and defend the real Presence of Christ's Body in the Holy Eucharist. 1563 [Latin in] FOXE *A. & M.* 979/1 This same presence may be called moste fyne, a real presence, that is a presence not fained, but a true and faithful presence. 1655 FULLER *Ch. Hist.* ix. vii. §12 Confessing the real presence, and that the manner thereof transcended his apprehension. 1687 *Dryden Hind & P.* ii. 32 And to explain what your forefathers meant by real presence in the Sacrament, After long fencing . . . Your salvo comes, that he's not here at all. 1797 *Encycl. Brit.* (ed. 3) XVII. 78/1 This account of the Romish doctrine concerning the real presence. 1839 KEIGHTLEY *Hist. Eng.* I. 322 Wickliffe . . . seems to have agreed with the leading Church of England, in denying a bodily but acknowledging a real spiritual presence in the sacramental elements. 1882 M. CREIGHTON *Hist. Papacy* i. ii. (1809) I. 124 Wyclif did not deny the real presence of Christ in the elements; he denied only the change of substance in the elements after consecration.

3. a. That is actually and truly such as its name implies; possessing the essential qualities denoted by its name; hence, genuine, undoubted.

1559 in *Strype Ann. Ref.* (1824) I. ii. App. vi. 401 Ecclesiastical laws made, cannot bynd the universall church of Christe, without the real assent . . . of the sea apostolicke. 1597 HOOKER *Ecl. Pol.* v. lxvii. 32 That which alone is material, namely the real participation of Christ . . . by means of this sacrament. 1667 MILTON *P.L.* x. 413 Planets . . . real Eclipses Then suffer'd. 1712 ADDISON *Spect.* No. 275 ¶3 Homer tells us that the Blood of the Gods is not real Blood, but only something like it. 1790 BURKE *Fr. Rev.* 31 Pressing down the whole by the weight of a real monarchy. 1836 HOR. SMITH *Tin Trump.* I. 12 Dressing like a real, and driving like an amateur coachman. 1866 G.

MACDONALD *Ann. Q. Neighb.* iv. (1878) 52 It was evidently real and not affected doubt.

b. Natural, as opposed to artificial or depicted. 1718 POPE *Arachne* 158 A real bull seems in the piece to roar, And real billows breaking on the shore. 1827 STEUART *Planter's G. Pref.* (1828) 2 In removing Wood, for the purpose of creating Real Landscape, plants of a large size are necessarily employed.

c. *Mus.* (See *quots.*) 1809 OUSELEY *Counterp.* xiv. 83 Counterpoint in more than four real parts, i.e. parts which proceed together, and yet have each a different melody'. *Ibid.* xix. 160 A fugue with a subject, the answer to which gives every interval by exact and simple transposition, is called a real fugue. 1889 *Prout Harmony* v. §139 ff. . . the quality of the intervals is exactly the same in the imitations as in the pattern, the sequence will be real, i.e. exact. . . A real sequence is much rarer than a tonal one.

4. a. That is actually present or involved, as opposed to apparent, ostensible, etc.; *spec.* in *Econ.*, reckoned by purchasing power rather than monetary or nominal value.

1716 POPE *Let. to Lady M. W. Montagu* 18 Aug. Whatever I write will be the real thought of that hour. 1771 *Junius Lett.* lix. 307 I doubt not they delivered their real sentiments. 1775 JOHNSON *Journey to Western Islands* 368 Leasley . . . related so punctiliously, that a hundred hen eggs, new laid, were sold in the Islands for a penny. . . . Posterity has since grown wiser; and having learned, that nominal and real value may differ, they now tell no such stories. 1776 ADAM SMITH *Wealth of Nations* I. i. v. 39 Labour, like commodities, may be said to have a real and a nominal price. Its real price may be said to consist in the quantity of the necessities and conveniences of life which are given for it; its nominal price, in the quantity of money. 1802-12 BENTHAM *Ration. Judic. Evid.* (1827) IV. 644 note, There lurks the real reason at the bottom of the ostensible one. 1866 BYRNALL *Glas.* 279 With regard to the real explanation of these effects, it may be shown [etc.]. 1870 LOWELL *Study Wind* 249 An imperturbable perception of the real relations of things. 1882 R. BIRHELL *Counting-House Dict.* 208 The nominal value of a coin is that value which is assigned to it by law, and often differs very materially from its real or metallic value. 1885 J. L. JOYNSON *Tr. Marx's Wage-Labour & Capital* 10 The real wage expresses the price of labour in relation to the price of other commodities. . . Real wages may remain the same, or they may even rise, and yet the relative wages may none the less have fallen. 1929 *Soc. Sci. Abstracts* 23 The close similarity of the general price level, substantiates its use as a measure of 'real income'. 1936 K. A. H. EGGERTON *Econ. Terms* (ed. 2) 131 Real wages at such times change at a very different rate, and sometimes in the opposite direction, from nominal or money wages; being based on the purchases a wage at any given time will make. 1964 GOULD & KOLB *Dict. Soc. Sci.* 454/1 If a series of national product estimates for several years is divided by a price index, each year's national product being divided by the price index for that year, the resulting series is known as *deflated* or *real* national product, or national product in *real terms*. 1976 *Glasgow Herald* 26 Nov. 1/6 Real earnings have fallen in the past few years and there is no way we can agree to any further reduction in the purchasing power of our members. 1981 *Sunday Times* 16 Apr. 14 Despite an urgent maintenance and restoration programme, it [sic, the National Trust] is spending less in real terms on looking after its property than it was two years ago.

b. The actual (thing or person); that properly bears the name.

1631 DONNE *Poems* (1650) 9 The Kings real, or his stamped face. 1660 F. BROOKE *Tr. Le Blanc's Trav.* 10 One of them to his thinking favoured very much his companion, and as he was about to follow them, his real companion called him to come back. 1704 [see HORIZON 3]. 1774 *Goldsb. Nat. Hist.* (1776) IV. 244 The bag . . . may rather be considered as a supplemental womb. In the real womb, the little animal is partly brought to perfection. 1813 *Sporting Mag.* XL. 175 She went the real pace, having passed this extent of country in forty-five minutes. 1840 MACAULAY *Ess. Clive*. It was absurd to regard him as the real master of Hindostan. 1869 RUSKIN *Q. of Air* §5 From the real sun, rising and setting. . . from the real atmosphere [etc.].

c. *the real thing*. (a) The thing itself, as contrasted with imitations or counterfeits; hence *slang*, the 'genuine article'.

1828 LADY MORGAN *Autobiog.* (1850) 15 He is the real thing, and no mistake. 1858 HAWTHORNE *Fr. & It. Notebks.* II. 37 Represented with the vividness of the real thing. 1846 *Punch* 20 June 272/2 You, who will not subscribe to the real thing; come, pull out your purse to the name. . . although you know that you ask for the 'Ragged Schools' . . . beg subscriptions for the 'Youths of Limited Circumstances'. 1884 *Art Amateur* Dec. 23/1 Those persons who indulge in . . . having . . . Japanese rooms in their houses, but have only a ludicrous imitation, will be interested in seeing here the real thing. 1902 T. W. H. CROSLAND *Outlook Odes* 31 My tobacco merchant, who sells me two ounces of the real thing every week. 1939 *War Illustr.* 2 Dec. 365 The 'stand-by' atmosphere of the first few weeks of war may be lost at any moment in the urgency of the 'real thing'. 1977 *Time* 22 Aug. 40/2 But the copied Coke may not work. India's soft-drink fanciers have learned to distinguish between ersatz Coke, which is peddled everywhere on the Indian market, and the Real Thing.

(b) *spec.* True love as distinct from infatuation, flirtation, etc.

1857 C. M. YONGE *Dynevor Terrace* I. xi. 173, I could not part with you if you were not sure the 'real thing' was felt for you. 1906 J. GALSWORTHY *Man of Property* iii. iii. 302 This was none of those affairs of a season that distract men and women about town. . . This was the real thing! 1929 *Women's Digest* in *Diogenes* 611 It had come at last. The Real Thing. George had never been in love before. Not really in love. 1931 J. CANNAN *High Table* x. 152 He was afraid that she would think he was just flirting. . . that it wasn't the Real Thing. 1941 M. MCCARTHY in *Partisan Rev.* VIII. 327 All that conjugal tenderness had been a brightly packaged substitute for the Real Thing. 1955 E. WAUGH *Officers & Gentlemen* ii. ii. 189, I thought of you at the last. Ever since we met I've known I had found the real

thing. 1960 *Woman's Own* 19 Mar. 17/2 Once these phases are over, you should be ready for the Real Thing. . . the man who will be exactly right for you. 1973 G. SCOTT *Water Horse* (1974) xvii. 109 A girl . . . whom she knew to be looking for the Real Thing in Spain.

d. *the real McCoy*; see MCCOY.

e. *real tennis* = TENNIS *sb.* I. Also *attrib.* The usage distinguishes the original game from the modified form which became the more popular after 1874; see LAWN-TENNIS and TENNIS *sb.* 2. Derivation from *REAL* 'a' is a folk etymology.

1880 [see *jeu de paille* s.v. *jeu d.*]. 1902 [see *royal tennis* s.v. *royal* s.v. 152]. 1954 A. S. C. ROSS in *Neophilol. Mitteilungen* LV. 22 The games of real tennis and piquet . . . are still perhaps marks of the upper class. 1966 *Oxford Mag.* Michaelmas, No. 8, p. 149 A splendid exhibition of real tennis was given at the Merton Street court on Sunday. 1972 *Daily Tel.* (Colour Suppl.) 14 Jan. 25/4 There are 17 Real Tennis courts in use in the country. 1975 *Country Life* 30 Jan. 258/1 Today tennis means to most people lawn tennis, while its . . . ancestor . . . has survived under the title 'real tennis' . . . Only one public school boasts a real tennis court. . . Canford in Dorset.

f. *real ale*, a name sometimes applied to draught beer that has been brewed and stored in the traditional way, and which has undergone secondary fermentation of the yeast in the container from which it is dispensed; also called 'cask-conditioned' beer; *real coffee*, coffee made directly from ground coffee beans, as opposed to 'instant' coffee.

1964 L. DEIGHTON *Funeral in Berlin* iv. 281 Could you find us a little cup of real coffee? 1972 *What's Brewing* Oct., Mr A — B — . . . is ripping out the keg taps and replacing them with real ale from wooden barrels. 1973 C. HURT *Death of Eng. Pub* i. 25 The beer-drinker who feels strongly about the declining quality of his pint has two organisations he can turn to. . . the long-established Society for the Preservation of Beers from the Wood, and the more recently formed, more militant CAMRA (Campaign for Real Ale). 1974 N. F. SINGH in *Country Dressing of Diamond* 21 'Where's the petrol Gilbert?' 'Be back in 27 minutes.' 'Then you might make us some real coffee.' 1974 *Good Beer Guide* (CAMRA) 2 The real ale we are talking about has to stand up to three tests: in the way it is brewed, the way it is stored and the way it is served. 1976 *Evening Standard* 20 Dec. The most popular of about a dozen real ales brought in from distant parts to a growing number of pubs in the capital. 1980 *Times* 23 Sept. 8/3 In the 1970s, 'the real ale' fashion took hold.

5. † a. Sincere, straightforward, honest. *Obs.* (freq. in 17th c.).

1597 *BACON Ess., Ceremonies & Respects* (Arb.) 24 He that is only real had need have exceeding great parts of vertue. 1630 R. JOHNSON'S *Kindg. & Commw.* 51 The Dutch hath an honest and real manner of dealing. 1647 CLARENDOU *Hist. Reb.* i. §35 If his intentions were real. 1686 T. CHARDIN *Trav. Persia* 173 Supposing he should be real and sincere. 1709 MRS. CENTILIVRE *Gambeter* I. i. If I could believe thee real, my joys would be complex.

† b. True or loyal to another. *Obs.*

1642 EARL OF CLANRICARDE in *Carte Ormonde* (1735) III. 79 To have a person soe full of worth and honour to be firme and real to me. 1690 *Ser. Hist. Chas. II & Jas. II.* 91 Which, had England been real to the confederate, might have been easilie wrested again out of his hand.

c. Free from nonsense, affectation, or pretence; 'genuine'. Also loosely, aware of, or in touch with, real life.

1847 TENNYSON *Princ. Concl.* 181 They hated banner, wish'd for something real. 1851 HAWTHORNE *Ho. Sev. Gables* ix. Phoebe's presence made a home about her. . . She was real 1880 MRS. WHITNEY *Odd or Even* xxvii. She was so near real people who meant every bit of their lives. 1961 *Noble Savage* Fall 12 He [sic, Seymour Krinn] alludes to something called 'direct writing', and he finds that criticism gets in the way of his 'truer, realer, imaginative bounce'. 1964 *Sunday Express* 1 Mar. 22/5 Most [actors] . . . are so insincere. . . Albie. . . is an exception. . . He's a real person. 1966 *New Statesman* 17 June 873/2 This was a realer America than I had known in the past, hitching on this or that bandwagon or presidential campaign. 1967 P. WELLES *Babyhip* (1969) xxviii. 179 Sometimes I wish I were back in Paris. The people seemed realer. 1969 *Newweek* 9 June 95 Why suffer all the bad hotels and rotten food and accountants and taxes if you waste the opportunity on stage to be real? 1972 *Scotsman* 7 Aug. 8/5, I notice . . . the editor-designate of the much discussed 'Scottish International' review telling us that Glasgow is a 'realer' city than Edinburgh. 1976 *New Yorker* 1 Mar. 35/1 'Ellen, be real for once. I said we'd get together.' 'In your letter you said we'd have dinner.' 1977 *Time* 25 July 45/2 Billy is very sweet and very real.

II. 6. Law. (Opposed to PERSONAL.)

a. Of actions, causes, etc.: Relating to things, or *spec.* to real property (see c).

In early use freq. placed after the sb., and with pl. in -s. 1448 *Shillingford's Lett.* (Camden) App. 139 Any action real personal and movt upon any person or persons. 1535 *Act 27 Hen. VIII.* s. 26 §4 All actions realles, hereafter shalbe conceived, perpetrated, or sued for any landes. 1574 T. Littleton's *Tenures* 41 If the villain be demandant in an action real, or plaintive in an action personal. 1603 OWEN *Pembrokesh.* (1892) 155 Pleas real and mixt for landes are and must be sued to have. 1652 GAULLE *Magastrom*. 342 All matters or causes, criminal or real. 1768 BLACKSTONE *Comm.* III. 17 Real actions. . . which concern real property only. 1818 CRUISE *Digest* (ed. 2) III. 491 After an real action was barred by length of time. 1863 H. Cox *Instit.* ii. ix. 512 Real actions, brought for the specific recovery of freeholds.

b. Connected in some way with things or real property: (see *quots.* and Wharton's *Law Lexicon*).

1467-8 *Rolls of Parli.* V. 578/2 Lands, Tenementez and other Possessions. . . in demeanc and land possession. 1625 *BURGES Pers. Tiithes* 48 How much should be due, where no Custome, Commission real, or other sufficient Priviledges

EXHIBIT 7

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