ELECTRONIC DOCUMENTARY TRANSACTIONS: CAN THE EXISTING STATUTORY FRAMEWORK ADEQUATELY GOVERN THIS NEW AUTOMATING MEDIUM?*

INTRODUCTION

The increase in the use of electronic techniques in the fields of banking and international trade during the past decade has been dramatic. As a result of this proliferation in automation, the law and practice of international trade has called for a reshaping of the rules and procedures governing documentary credits, one of the sole areas of banking yet attached to "pieces of paper." The resulting situation has generated much concern, for the legal regulations governing the subject are "clearly designed and adequate for transactions which were established, performed, and recorded by paper-based documents. However, these regulations [under an automatic document scheme] are now proving to be unsuitable or inadequate for electronic transactions."[1] Not only are the regulations outdated, but also they have fallen prey to "abuses and perversions of their normative intent."[2]

Amending current legal procedures would be effective only in the case where the new practice would inflict little harm upon the existing statutory framework. Although the fundamental principles of documentary transactions are not altered by the emergence of this new electronic medium, the original statutory rules and procedures are rendered ineffective under an electronic format. Moreover, the very premise upon which electronic transfers rests is virtually antithetical to principles governing paper-based transactions. Consequently, banks have developed their own rules to govern letters of credit. These rules, however, provide too scant a framework upon which to structure the rights and responsibilities of parties to such transactions. In light of the current state of the law, a careful rethinking of the conceptual basis upon which credit law is predicated must be effected so as to incorporate this new medium of conducting international trade.

This note examines the status of electronic documentary transactions under the existing trade system. Part I briefly discusses the nature of the letter of credit and how it operates traditionally and electronically. Part II examines the legal framework under which these credit systems presently operate. Part III considers the emerging legal problems of a new system operating under outdated regulations. Part IV discusses new banking practices for customer-initiated issuances.

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1. F. Schwank, Electronic Documentary Credits and Guarantees: Emerging Legal Problems 1 (May 26, 1988) (unpublished manuscript) from an address at IV Congresso Internazionale Informatica e Regolamentazioni Giuridiche, Rome, May 16-21, 1988.
2. Kozolchyk, *Is Present Letter of Credit Law Up to Its Task?*, 8:2 GEO. MASON L. REV, 286-349, 288, (1986).

PART I: DOCUMENTARY TRANSACTIONS—Mechanics of the Transaction

Letters of credit, also known as documentary credits, are the most frequently employed method of exacting payment for goods and services in export trade.[3] These documents usually evidence irrevocable undertakings by a bank to pay the seller upon presentation of certain documents evidencing performance of contractual obligations. The letter of credit is issued independently of the underlying trade contract between the buyer and seller, and is best characterized in the following terms:

> The banker. . .acting on behalf of the buyer and either directly or through the intervention of a banker in the seller's country, assumes liability for payment of the price, in consideration perhaps, of the security afforded to him by an implied pledge of the documents of title to the goods or of his being placed in funds in advance or of an undertaking to reimburse, and of a commission.[4]

This characterization reveals the essence of the documentary credit transaction: the bill of lading represents the goods, and the document of title provides a means of financing the transaction.[5] The bank is only prepared to provide such financing to the seller because it holds the title documents as collateral for the advance, and if necessary, can take recourse to the buyer as instructing customer as well as to the seller as drawer of the bill. The usefulness of the letter of credit in the case of international finance relies upon the practice of "raising money on the documents, so as to bridge the period between the shipment and the time of obtaining payment against [the] documents."[6]

Although numerous variations of letter of credit transactions exist, certain distinct stages are common and readily identifiable in all such transactions:

> (A) The exporter and the overseas buyer agree in the contract of sale that payment shall be made under a letter of credit.
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> (B) The overseas buyer instructs a bank at his place of business (the issuing bank) to issue an irrevocable documentary credit in favor of the exporter on terms specified by the buyer.
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> (C) The issuing bank arranges the credit instruments in accordance with the buyer's instructions. The credit lists the documents the seller must present and the bank undertakes to pay provided these documents are presented. (The list of documents typically includes: bill of lading, commercial invoices, insurance policies, attestation of origin, etc.)
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> (D) The issuing bank arranges with a bank in the locality of the exporter (the advising bank) to negotiate, accept, or pay the exporter's draft upon delivery of the transport documents by the seller. On numerous occasions, credit is also payable at the counters of that bank (the nominated bank).[7] The nominated bank may add its confirmation to the credit, obliging the confirming bank to pay in

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3. C. Schmitthoff, SCHMITTHOFF'S EXPORT TRADE—THE LAW AND PRACTICE OF INTERNATIONAL TRADE 336 (1986) [hereinafter SCHMITTHOFF]
4. H.C. GUTTERIDGE & M. MEGRAH, THE LAW OF BANKERS' COMMERCIAL CREDITS (6th ed., 1979), *quoted in* SCHMITTHOFF, *supra* note 3.
5. *Id.* at 337.
6. T.D. Bailey, Son & Co. v. Ross T. Smyth & Co. Ltd. (1940) 56 T.L.R. 825, 828 *quoted in* SCHMITTHOFF, *supra* note 3.
7. The quality of the credit as "revocable" or "irrevocable" refers to the obligation of the issuing bank to the seller. The quality of the credit as "confirmed" or "unconfirmed" refers to the obligation of the advising bank to the seller.

the same fashion as the issuing bank. Unless the credit is confirmed, the nominated bank pays only as agent of the issuer, and the seller has no direct right of action against it in case of default.

(E) The advising bank informs the exporter that it will negotiate, accept, or pay his draft upon delivery of the transport documents.

(F) The exporter sends the goods and presents the documents for payment.

(G) The nominated bank pays and sends the documents to the issuer for reimbursement. (Often reimbursement is made through a third bank designated in the credit.)

(H) The buyer collects the documents from the issuing bank and takes possession of the goods.[8]

Provided the correct documents are tendered before the expiration of the credit, there is a binding undertaking of the issuing bank, if the credit is irrevocable, and also of the confirming bank to pay the purchase price. A bank which has given the contractual undertaking will neither accept instructions from the buyer not to pay a seller who has performed the conditions of the credit, nor accept a revocation of the credit.[9]

Since letter of credit arrangements may be broken into stages, each may be automated separately. The customer and the issuing bank agree on a computer-stored format of a letter of credit to be used in all or most of the issuances involving that customer. A "master application" is executed and the issuing bank sets forth the general terms and conditions for individual issuances. The customer generates the text of the credit at his personal computer terminal by inserting, deleting, or altering language in the master. The customer initiated text is transmitted electronically from the desk terminal to the issuing bank, accompanied by an electronic signal or code for customer identification, and the issuing bank's authentication. The text is then reviewed and amended if necessary. Once the issuing bank is satisfied with the terms and technical preconditions of issuance, the text is released to the seller by the intermediary bank.[10]

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8. Rowe, *Automating International Trade Payments—Legal and Regulatory Issues*, 4 J.I.B.L. 234-240, 234 (1987). The majority of letters of credit include an irrevocable payment obligation of the issuer and of the confirming bank. Revocable credits, which permit cancellation or amendment at any time without the consent of the seller, are quite rare.

9. SCHMITTHOFF, *supra* note 3, at 340. Professor Schmitthoff comments that it is important to note that the law relating to letters of credit is founded on two principles: 1) the autonomy of the letter of credit, and 2) the doctrine of strict performance. In regard to the first principle, the credit is separate and independent of the underlying contract of sale. A bank which operates such an arrangement is concerned only with whether the documents tendered by the seller correspond to those specified in the credit instructions. The only exception to this rule occurs in the case of fraud, wherein the bank should refuse to pay under the credit if it is proved that the documents, though in order on their face, are fraudulent and that the seller was involved in the fraud. *See* Article 3 and Article 4 of the UCP. *See also* United City Merchants (Investments) Ltd. v. Royal Bank of Canada, 1 A.C. 1 68 (1983); Power Curber International Ltd. v. National Bank of Kuwait, 1 W.L.R. 1233 (1981).

As to the second principle, a bank may reject documents which do not strictly conform with the terms of the credit. The basis for this rule is that the advising bank is an agent of the issuing bank which is in turn an agent of the buyer. If such an agent acts outside its limited authority, the principal may disown the act of the agent who cannot recover from him and has to bear the commercial risk of the transaction. *See also* Bank Melli Iran v. Barclays Bank (Dominion Colonial and Overseas), 2 Lloyd's Rep. 367 (1957); Equitable Trust Company of New York v. Dawson Partners Ltd., 27 Ll. L.R. 49 (1927); Soproma S.P.A. v. Marine & Animal By-Products Corporation, 1 Lloyd's Rep. 367 (1966). *See generally*, SCHMITTHOFF, *supra* note 3 at 340-346.

10. Kozolchyk, *supra* note 2, at 288.

The coded instruction to release the credit is treated as final, and thereafter the customer remains bound to the terms of the letter of credit without being able to cancel or amend the issued credit.[11] The customer-initiated electronic instruction to release, followed by the issuing bank's release, terminates the customer's power to cancel the issuance unless the credit was sent to an intermediary bank that neither notified nor confirmed it to the beneficiary. Thus, two new features are introduced into the letter of credit scheme. First, the customer has greater control over the drafting of the terms and conditions expressed in the issuance than in the traditional practice. Second, since the electronic format is designed to shorten the time of issuance and notification, the issuing bank has less time within which to decide on credit terms such as those specified by the customer.[12]

The seller then ships the goods and claims payment from his bank. He submits an electronic invoice and a confirmation that all other documents in paper form except the transport details have been sent to the buyer directly. The carrier submits the transport details to the bank electronically; the seller's bank pays, and claims reimbursement from the buyer's bank. The buyer's bank notifies the buyer and debits his account.[13]

Given the customer's status as a quasi-issuer, the central role of the coded authorization, and the shortness of time for the bank to abstain or retract, the bank must know when the customer's initiated text is truly final. While an establishment provision defining the rights between issuer and customer is now routinely inserted in many master application forms, its effect transcends the customer-issuing bank relationship.[14]

PART II: LEGAL RULES GOVERNING LETTERS OF CREDIT

Letters of credit were created by the international business community as a means of introducing predictability and security into international commercial transactions. This medium of conducting international business has always adapted to the changing needs of the economic climate. Unfortunately, the rules governing these transactions have not been amended concurrently.

The banking practice relating to documentary transactions is formalized by the Uniform Customs and Practices for Documentary Credits (U.C.P.), a system promulgated by the International Chamber of Commerce (I.C.C.).[15] Because of

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11. This concept, known as establishment, is defined in the Uniform Commercial Code (hereinafter U.C.C.), Official Comment to Section 5-106, as "the point at which the issuer is no longer free to take unilateral action with respect to the cancellation of the credit or modification of its terms." U.C.C. § 5-106, Official Comment 1 (1978).
12. Kozolchyk, *supra* note 2, at 289.
13. *Id.*
14. *Id.* at 290. Creditors accustomed to policing their debtors-customers' letter of credit exposure by obtaining letter of credit copies directly or indirectly from the issuing bank must now look for more timely indicators. They can no longer assume that letters of credit are not established merely because the operative credit instruments have not been sent to the customers.
15. Byrne, *The 1983 Revision of the Uniform Customs and Practice for Documentary Credits*, 102 BANKING L.J. 151 (1983). Byrne comments that the 1983 U.C.P. was drafted by the I.C.C. Commission on Banking Technique and Practice, "reflecting the interests of nations with national chambers of commerce, in cooperation with the United Nations' Commission on International Trade Law, reflecting the interests of those countries not having chambers of commerce." The present draft was adopted in June 1983, replacing the 1974 revision which

its international following and its detailed requirements of conformity, the U.C.P. is the standard operating manual guiding the most practical aspects of the credit operation. The 1983 revision of the U.C.P. was enacted to accommodate the "communications revolution," the replacement of paper as a means of transmitting information by automated or electronic data processing. Article 12 substituted the term "teletransmission" for the 1974 terms "cable telegram" and "telex." The 1983 revision does not define the new term, and "other than vague references in the Foreword to the replacement of paper, provides no indication of the drafters' intent. Possibly, a definition was omitted to permit flexibility. If so, the result unnecessarily invites confusion."[16] The 1983 U.C.P. contain provisions which enable the banks, subject to certain safeguards, to accept electronic, computerized or other automated documents.

However, with this definition, there remains a question of whether a writing must exist. A computerized message will easily fall into the definition of "teletransmission," since no writing need be produced. By failing to provide definitional guidance regarding the reducibility of the telecommunication to writing, the U.C.P. leaves banks without guidance or certainty.[17]

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was standard banking practice in 162 countries.

The U.C.P. applies only if the parties have decided to incorporate it into their contract. Article 1 of the U.C.P. clarifies this stance: "These articles apply to all documentary credits, including, to the extent to which they may be applicable, standby letters of credit, and are binding on all parties thereto unless otherwise expressly agreed. They shall be incorporated into each documentary credit by wording in the credit indicating that such credit is issued subject to Uniform Customs and Practice for Documentary Credits." 1983 revision, I.C.C. Publication No. 400.

Professor Schmitthoff summarized:

> In English law, the U.C.P. do not have the force of law or the status of a trade custom. In accordance with Article 1, they apply only if the parties have incorporated them into their contract. This is normally done by British banks, when contracting with a United Kingdom party, an overseas merchant, or other banks. Consequently, the English courts are familiar with the provisions of the U.C.P. and have frequently interpreted them. The position is similar in France. In the State of New York, the provisions of the U.C.C. on letters of credit are replaced by the U.C.P. where the parties have agreed to apply them or they are customarily applicable. In countries which have national banking associations, the general standard conditions applied by the members of these associations often incorporate the U.C.P.

SCHMITTHOFF, *supra* note 3, at 338.

16. SCHMITTHOFF, *supra* note 3 at 153.

"The 1983 version of the U.C.P. sets out to achieve three aims and does so successfully. It adapts the U.C.P. to the changing documentary requirements of the transport revolution, it makes it possible to use in documentary credit transactions modern means of telecommunications and automated transmission, and thirdly it is more precise in its wording than the previous versions of the U.C.P. But the 1983 version wisely refrains from attempting to settle all problems which have arisen with respect to letter of credit transactions. In particular, it does not attempt to regulate the attitude of banks if it is alleged or proved that a fraud has been committed with respect to the goods, to which the credit refers, or to the documents. In spite of the unsatisfactory decision of the House of Lords in United City Merchants (Investments) Ltd. v. Royal Bank of Canada this question cannot be regarded as being finally settled.

"The 1983 version of the U.C.P. is thus a cautious but necessary measure which is founded on the consensus of leading banking experts." Schmitthoff, *The New Uniform Customs for Letters of Credit*, 1 J.C.B. 193-199, 199 (1983).

17. U.C.P., art. 22 (1983).

Article 22(c) provides however:

> "(c) Unless otherwise stipulated in the credit, banks will accept documents produced or appearing to have been produced:

Relatively little domestic legislation exists. The principal exception is the United States Uniform Commercial Code (U.C.C.), article 5. The Constitution of the United States empowers the individual states rather than the federal authorities to legislate on most commercial law questions. The U.C.C. provides a harmonized system throughout the United States which of itself has no legal force, yet by adoption is incorporated into numerous state statutory schemes.

PART III. LEGAL ISSUES ARISING FROM ELECTRONIC LETTERS OF CREDIT

Reliability and security in the use of electronic data systems are essential to all parties to a trade transaction. These parties require certainty in their expectations of payments and receipt of goods. The transition from a paper-based system to an electronically stored and transferred document framework breaks with former commercial practice and has not yet been assimilated wholly into the international banking and trade practice. This lack of continuity causes great concern over the legal force that such documents will be accorded. Of even greater importance are the emerging legal problems that these documents create under the existing statutory framework—a system ill-suited and inadequate for structuring the rights and responsibilities of the parties in an electronic context. At present, these relationships have not yet been defined in an overarching international context, creating the risk that courts will lack adequate guidance in deciding cases in this new area, and, as a result, heightening the risks faced by all parties.[18] An examination of emerging problems, definitional and legal, is warranted.

A. Definitional

1. The Operative Writing

The operative writing is referred to as the letter of credit in the U.C.C. and as the operative credit instrument in the U.C.P. The need to identify the operative writing became apparent once issuing banks started relying upon telegram and telex communications to the advising and confirming banks instead of the traditional concomitant or subsequent typewritten confirmations mailed to the beneficiary. A unitary notion of establishment and operative credit instrument is required.[19]

2. Form of the Credit

Documentary credits emerged largely through merchant and banking practice, and few countries legally require the credits to be completed in any particular

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(i) by reprographic systems;
(ii) by, or as the result of, automated or computerised systems;
(iii) as carbon copies,
if marked as originals, always provided that, where necessary, such documents appear to have been authenticated."

18. Scott, *Wire Transfers: The Proposed Uniform New Payments Code*, Commercial and Consumer Law From an International Perspective: Papers from the Conference of the International Academy of Commercial and Consumer Law, Castle Hofen, Austria, July 17-22, 1984, at 108.
19. Kozolchyk, *supra* note 2 at 296.

form. The practice has been primarily paper-based and "the legal rules affecting the transactions reflect the presumption that only paper-based documentation is to be used. Where the practice has now changed to accommodate the new practice of automating, the legal rules have not yet effected the appropriate changes."[20] The definition of a letter of credit given in article 5 of the U.C.C. is an example of national legislation which has become inadequate with the advent of electronic means. The presumption is also evidenced in numerous examples of the U.C.P. (1983).[21]

Though some parts of the credit transaction have been replaced by electronic equivalents, the presentation by the beneficiary at the counters of the advising or confirming bank of the demand for payment still relies upon paper-based documents. The necessary paper-based documents typically include bills of lading, freight forwarder's certificate, certificates of origin, and insurance documents.[22]

It is important to realize that the current practices reflect the belief that possession of the typewritten operative document is not as important as the receipt of notice concerning such a document by the intermediary bank.[23]

3. *Authentication*

The law of traditional documentary transactions does not dictate the form which the documents must take nor the elements which they must contain. A majority of the documents in this sort of transaction may be produced electron-

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20. Schwank, *supra* note 1 at 7.
Bill of Lading:
Bills of Lading are often negotiable and rights under them are created and assigned by endorsement and actual delivery. Bank practice is to require a full set of copies and the original bill. The only electronic alternative to this which is conceivable is an agreement by the bank to pay upon receipt of an electronic message from the carrier which confirms the receipt of the goods that have been taken charge.
Freight Forwarder's Certificate of Receipt:
The freight forwarder's certificate of receipt is used whenever a carrier's document evidencing dispatch of goods such as a bill of lading is not available or is unsuitable. It is logical then to establish and to transmit this document by electronic means.
Certificate of Origin:
The Certificate of Origin is by its very nature a written document and usually bears the official seal of the relevant government issuing authority.
Insurance Documents:
Insurance documents, by their very nature, are paper-based. Article 35 of the U.C.P. requires insurance documents to be issued and/or signed by the insurance company or agent. *Id.* at 9-11.

21. Article 2 of the U.C.P. describes a documentary credit (a letter of credit) as "any arrangement . . . whereby a bank, acting at the request and on the instructions of a customer, (i) is to make a payment to or to the order of a third party . . . against stipulated documents . . ."
Article 4 of the U.C.P. states that in letters of credit "all parties concerned deal in documents, not in goods, services and/or other performances to which the documents may relate"
Article 22(a) of the U.C.P. states that all "instructions for the issuance of credits and the credits themselves . . . must state precisely the document(s) against which payment, acceptance or negotiation is to be made"
Articles 25 and 26 of the U.C.P. require all transport documents to be "the full set of originals issued to the consignor if issued in more than one original"
Article 35 of the U.C.P. requires insurance documents to be "issued and/or signed" by the relevant insurance agency.

22. Schwank, *supra* note 1, at 9.

23. An automated system would be much more efficient than the present paper-based system.

ically. However, some exceptions exist. The negotiable instruments—bills of lading, documents of carriage, bills of exchange—are regulated by a detailed statutory framework which mandates the requirements of written form as well as signature. Since the paper documents constitute title to money and goods, the negotiable instruments are signed by the issuing company. The signed documents provide written evidence of the issuer's approval and of the genuineness of the documents.[24]

Electronic transfers cannot be signed in the traditional manner, so the source and validity of any message transmitted is doubtful. Questions arise concerning the susceptibility of electronic messages to fraudulent behavior. Protective devices are available such as personal verification numbers, microcircuit cards enabling access to the terminals, encryption and test keys. Though these devices discourage unauthorized use, the majority of cases of fraud involve improper supervision or careless use of the devices, enabling fraudulent actors to gain access to the system terminals.[25]

B. Legal Problems

1. Mistake

Legal liability accrues to any party responsible for incorrect, delayed, or misaddressed messages sent through the negligent or fraudulent acts of that party or his agent. The existing provisions of the U.C.P. do not reflect this notion, and generally exclude banks from liability for their fraudulent or negligent acts. Pursuant to article 18 of the U.C.P., banks are not liable or responsible for the consequences of any delay or loss in transit of any messages, letters or documents or for the delay, mutilation or errors arising in the transmission of any telecommunications. This sweeping disclaimer becomes difficult to justify when details and shipping information are transmitted electronically, often by means of systems and processing facilities the bank itself may have designed.[26]

A blanket exclusion, such as that suggested in U.C.P. article 18, may be permitted in a paper-based system where messages or telecommunications are transmitted through third parties such as government postal or telecommunications systems. The liability exclusion should not be permitted where the message was sent by bank officers through bank owned and operated systems. An international provision which firmly establishes the bank's obligations to undertake such responsibilities must be promulgated. A provision whereby a bank would be required to maintain its equipment, to perform all necessary procedures ensuring correct dispatch of messages, and to validate receipt or non-receipt of messages and their accuracy is in order.[27]

If the electronic message were relayed through several intermediaries, liability for delay or error may become quite difficult to establish. The buyer should be

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24. Banks and traders will not accept these instruments unless they are signed.
25. Swank, *supra* note 1, at 12.
26. Rowe, *supra* note 8, at 235.
27. Swank, *supra* note 1, at 15.

entitled to argue that it is the bank's responsibility to transmit messages accurately. A provision delimiting liability in this case must be set out.[28]

2. Fraud—Electronic Manipulation

As an electronic transfer cannot be signed as is required in traditional documentary transactions, the validity of the message becomes tremendously important. Fraud in such a transaction usually involves an unauthorized instruction, alteration of the account to which the entry is to be made, or the alteration of the amount of entry. Such manipulation is readily accomplished once an actor gains access to the terminal, and learns how to enter a transfer instruction including all accessing mechanisms. From this point, he will be able to send, receive, and alter messages virtually without detection. Although numerous devices have been developed lending an element of protection to the system, most instances of fraud arise from improper supervision or careless handling of details enabling access to devices and terminals.[29]

The legal posture of the sender and recipient in the case of fraud in the electronic credit has not as yet been clarified. It appears that the general rule is that a bank which honors in good faith a credit transfer instruction fraudulently signed can debit its customer's account. Numerous legal theories exist to support this result, but the underlying reasons rest upon the premise that a bank cannot distinguish a genuine message from one that is fraudulent. The bank customer

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28. Rowe, *supra* note 8, at 236. The Uniform Payments Code would require all institutions to handle written transfers in a manner consistent with reasonable industry practice. Moreover, a transmitter must act in accordance with the reasonable commercial standards of its business in receiving, processing, presenting, transmitting or returning a transfer. Consequential damages are not recoverable against a bank or transmitter which fails to meet its obligations. "Recovery is restricted to lost interest due to delay and is unrelated to the amount of the transfer." *See* Scott, *supra* note 17, at 122.

The United Nations Commission on International Trade Law ("UNCITRAL") Legal Guide on Electronic Funds Transfers adds that numerous methods are being developed to prevent errors from occurring within these international consumer transfer networks:

"The international banking community is currently engaged in several projects within the Banking Committee (T.C. 68) of the International Standards Organization (ISO) which should lead to generally accepted formats for the most commonly used message types in international funds transfers. ISO Draft International Standard (DIS) 7982, Part 1, contains vocabulary and data elements used in describing, processing and formatting funds transfer instructions. ISO/DIS 7746 provides standard telex formats for inter-bank funds transfer instructions. These standard formats, based upon S.W.I.F.T. message formats, are intended (1) to eliminate misinterpretation by the receiving bank of the sending bank's instruction and (2) to provide a basis from which can be developed systems for the automatic handling of telex funds transfer instructions. Other work of ISO T.C. 68 on such matters as test keys, technical characteristics of magnetic stripe cards and interchange message specifications for debit and credit cards will also contribute to more efficient, error-free and fraud-free electronic funds transfers.

"The eventual adoption by ISO of standard formats for telex funds transfer instructions which are in harmony with the S.W.I.F.T. message formats and agreement on vocabulary to be used in funds transfer instructions, and their adoption and use throughout the world for both domestic and international funds transfers, would reduce the likelihood of errors arising out of the need to rekey funds transfer instructions. A standard telex format with numeric field tags as well as field descriptors will permit the receiving bank to key the instruction into its computer system for entry into the records of the bank and for retransmission, if necessary, with no necessity for interpretation of the instruction. This will be of particular value when the sending and receiving banks are from different language areas."

29. UNICITRAL Legal Guide on Electronic Funds Transfers, at 49, U.N. Doc. A/CN.g/SER.B/1 (1987).

has the responsibility to guard the accessing mechanism from fraudulent use, and will be negligent in allowing unauthorized use of it.[30]

However, access to enabling mechanisms should not automatically remove liability from the bank, for it must take certain steps to determine the validity of seemingly authentic messages. Numerous systems have been developed, but the most practical for everyday use is the call back system, wherein the recipient must acknowledge receipt of the contents of the electronic message. The recipient, the bank, would request confirmation from the sender, and if such request for acknowledgement is not made, the recipient is under no duty to act. If the sender is acting fraudulently, it is doubtful he will request an acknowledgement. While this system is perhaps the easiest to implement, an established requirement for a callback system does not exist. Unless there is a specific request that a callback be included, it is not generally done.[31]

As to debiting the customer's account, the bank will do so for the amount of certain unauthorized instructions, especially where the fraud was made possible through the lack of controls on the part of the customer. For example, the customer's account may be debited for the amount of fraudulent transfers initiated by the customer's employees authorized to act in his behalf. This could be effected only to the extent that the transaction was so unusual that it ought to have raised the suspicion of the bank.[32]

When the fraud is accomplished by the use of a customer-activated terminal, liability is best assigned on the basis of a comparative negligence standard. This approach is the most logical in that it is the bank that has designed the security system and authorization procedures, and the customer who must carry these instructions out carefully. Such a determination works best where the fraud was made possible through clearly inadequate security and authorization, or where the customer has been unusually negligent in following those procedures.[33]

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30. *Id.* at 49.
31. Swank, *supra* note 1, at 13.
32. UNCITRAL, *supra* note 29, at 53.
33. *Id.* The Uniform New Payments Code, adopted by the 3-4-8 Committee of the Permanent Editorial Board of the U.C.C., has proposed a method for controlling certain instances of fraud. Some cases of fraudulent instruction involve agreed means of access or failure to alert the bank in such known cases or both. The allocation of loss between the bank and customer is, then, largely dependent upon which party acted negligently.

If the customer is per se negligent, and such negligence contributed to the loss, the loss must be on the customer unless the bank acted in bad faith or was a party to the fraud. Per se negligence connotes that certain behavior is made culpable without reference to specific facts or mitigating circumstances. Per se negligence would include the following: 1) the customer fails to inform the bank of stolen or misplaced means of accessing accounts; or 2) the customer voluntarily gives a personal identification code or access to another person who initiates the unauthorized transfer. If the customer is not per se negligent, he may still be generally negligent. The court is free to decide that a customer is negligent on the facts of the case at hand. In this instance, an unauthorized transmission made by gaining access to corporal terminals may result in a decision that the customer was negligent, for inadequate security was taken to protect against unauthorized access. If the customer is judged to be negligent by a court, the bank will still nonetheless take the loss if others failed to observe reasonable commercial practices, the standards of which the court itself will determine on a case-by-case basis.

The drawer bank has two defenses in addition to per se negligence: 1) the one year statute of limitation; and, 2) the failure of the customer to inspect a statement within 14 days of receipt.

The Uniform Payments Code provides that: 1) a transmittor or receiving bank is liable

An alternative approach would be to allow the bank to debit the customer's account for the fraudulent transfer to a certain limit. Under this approach, the customer bears a risk of loss large enough to encourage him to report the loss or theft of the enabling mechanism, while the bank bears the risk of major loss, encouraging it to strive for a more secure procedure.[34]

3. Checking Data

Article 15 of the UCP provides that a bank must check the face appearance of the documents presented by the seller at its counters to ensure compliance with the credit terms of the transaction. The job is usually performed by a trained employee, who, at the onset of electronic transmission of the credit documents, would check the credit information on a computer screen. As the system becomes more electronically sophisticated, the receiving computer may itself be programmed to compare the documents with the credit details.[35]

As the latter option becomes an increasingly attractive practice, the rules governing all such transactions must determine responsibility in an electronic context—that is, to determine how liability shall be apportioned if a bank's computer fails to spot that which a human checker would have sensed. A court must have guidelines to assess a bank's duty of care under this framework, for the human standard of "competent human checker" may no longer apply.[36]

PART IV. CURRENT ELECTRONIC PRESENTATION AND TRANSFER SYSTEMS

Numerous banking systems provide specific means for the settling of disputes created by electronic documentary credits. The systems and the rules derived therefrom present similar concerns as those raised under the outdated U.C.P. The private rules developed in the wake of the U.C.P.'s inability to adequately operate under the onset of computerized transactions do not provide a satisfactory legal framework for structuring the rights and responsibilities of the parties involved. In general, the rules as developed under the various banking systems fail in four respects:

1) The rules do not govern the relationships between the buyer and the seller and their respective banks. These relationships are presently governed, if at all, by bank contracts which do not properly allocate significant risks among the parties;
2) The rules fail to address issues relating to the obligations of the parties as well as affirmative defenses;

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for loss due to its own material alteration of an order and, 2) the first bank to make payment on an order materially altered by an interloper is liable for the resulting loss. The maximum liability in both instances is the amount of unrecovered mistaken or fraudulent payments; there is no liability for consequential damages.

If the bank is found liable for material alteration of orders, certain defenses are available. The bank may defend on grounds of any type of negligence of the funds claimant or of the drawer (the party whose account was debited on the order) as long as the bank did not act in bad faith, participate as a party to the fraud, or fail to observe reasonable commercial standards. *See* supra, note 17, at 120.

34. *Id.* at 53.
35. Rowe, *supra* note 8, at 236.
36. *Id.*

3) The rules do not adequately address transfers which are fraudulent or the result of mistake in transmission; and
4) The rules call for the formation of private contracts, the provisions of which may not be enforceable in court for they do not operate within a statutory framework; thus, the contracts may be unenforceable on grounds of adhesion or unconscionability.[37]

Although numerous problems exist under these banking systems, an examination of a selected few is warranted.

In regard to the bill of lading, one writer suggests that the bill of lading could be transformed into the electronic equivalent of the air way bill. This transformation would make the resulting document compatible with other procedures designed for expediting the handling of cargo, such as a system of document replacement in air carriage of the United States Cargo Data Interchange System (CARDIS).[38]

The suggested waybill would not only reduce the time for issuance and presentation of the bill but also the time of handling the shipment at the point of destination. The notice of arrival would contain a computer printout of the text of the cargo receipt to the buyer; the notice of arrival and cargo key receipt would also contain a statement by the seller waiving his rights to the disposition of the shipped goods. Finally, the notice of arrival would include a statement indicating that the goods are to be held by the carrier as agent or bailee of a pledge by the buyer as owner as collateral for the bank named as consignee.[39]

This proposal threatens two fundamental institutions of secured transactions law. The first is the principle of documentary examination which requires that the confirming and issuing banks verify the tender of seller's documents as a whole and not in truncated or partial fashion. The second principle affects the power of the bill of lading to control disposition of the goods. The bill would cease to be an instrument of title.[40]

INTERTANKO and the Chase Manhattan Bank proposed a central registry system for bills of lading (known as "SeaDocs") that would replace the bank in the role of agent for the shipper. The proposed registry takes a substantial approach (*i.e.*, attempts to mimic the function of paper as closely as possible),

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37. Scott, *supra* note 18, at 112-13.
38. Kozolchyk, *supra* note 2, at 295.
(i) The seller provides the carrier with a description of the goods sold and the identity of their consignee, usually the issuing bank. The seller receives an electronically recorded cargo key receipt.
(ii) The cargo key receipt is presented by the seller to the paying or negotiating bank, and upon verifying conformity of this document with the terms of the letter of credit confirmation, the paying or negotiating bank pays the seller-beneficiary of the credit and transmits the information contained in the air waybill to the issuing bank.
(iii) A notice of arrival of the vessel is printed by the carrier's computer terminal at the final destination. This printout is mailed to the issuing bank a few days prior to the arrival of the goods.
(iv) The buyer, customer, or applicant for the issuing bank's credit pays the issuing bank, and the bank releases the notice of arrival to the buyer. This notice indicates an assignment or statement that the buyer can obtain delivery of the goods in the name of the consignee bank.
(v) The buyer presents the notice to the carrier and obtains delivery of the goods.
39. *Id.*
40. *Id.* at 301.

and is the least "forward-looking with respect to utilizing automatic data processing procedures as replacements for paper documents." The system was developed to meet the needs of oil tankers and producers, although it could easily be extended to cover other types of transactions.[41] Under the registry system, the shipper first has to receive a valid bill of lading in traditional form from the carrier and then must transmit the appropriate shipping information to the registry via telex. Until the paper data is received, the registry will consider the consignee as registered pending receipt of the documents. If sales are made subject to letters of credit or other security, the registry, acting as the shipper's agent, advises the issuing bank of the documents. This procedure saves time by avoiding the need to mail documents back and forth, and prevents any potential loss of the documents. Prior to entering port, the registry advises the carrier as to whom he is authorized to make delivery of the cargo. The carrier must obtain a receipt for the cargo from the consignee before surrendering the cargo and the registry will then send the carrier the bill of lading in exchange for the receipt issued by the consignee. By utilizing traditional paper documents, the registry system involves the least controversial procedures. Reliance on the traditional methods, however, may invite fraudulent practices at the point of exchange between the carrier and the consignee. Moreover, the system fails to eliminate much of the paper burden that carriers and shippers seek to avoid.[42]

The Datafreight System, developed by the Atlantic Container Line, works much the same way as would a traditional ocean waybill.[43] After Atlantic Container Line receives the shipper's cargo, it issues a signed paper receipt to the shipper. The shipper is expected to send all relevant documents such as invoices and certificates of origin to the named consignee on the Datafreight Receipt. In the meantime, an Atlantic Container Line computer processes the information in the receipt and sends it via its own private cable to the port of destination. Once in receipt of this information, another Atlantic Container computer on the other side of the Atlantic prints out all the relevant information

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41. A cargo of oil may be sold twenty times before being lifted out of the ground, and sold [yet] another ten times on the high seas. Moreover, the tanker carrying the oil may need only one or two days to reach the discharge port, and it may take the terminal operator two weeks to produce the shipping documents. A registry system would appear to resolve all the above-mentioned problems.

42. Professor Schmitthoff characterizes the S.W.I.F.T. system as follows:

> "The proposal has therefore been made to create an automated bill of lading registry as a central clearing house for bills of lading. It will be founded on the principle of multi-agency. The central registry will act as agent of the carrier, the seller, all parties to contracts of sale in the string, the ultimate buyer and, if the bill of lading is subject to a lien or pledge in favour of a bank, the bank. The original bills of lading will be sent directly to the registry and will not pass physically down the string. Every sales transaction in the string will be notified to the registry and the title of the purchaser will be noted on the bill. Eventually the registry will present the bill as agent of the last purchaser to itself as agent of the carrier and will give the master instructions for the delivery of the cargo or part of it at the port of destination. As the negotiable bill of lading is a bankable document and may have been accepted by a bank as collateral security, the registry will keep an additional register of pledges and liens in favour of a bank and will release delivery instructions of the cargo only if the bank in question has agreed. All communications between the participants and the registry will be by telex. They will be strictly coded for reasons of confidentiality."
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> 1 J.B.L. (185-192), 186 (1983).

43. 13 U.N. ESCOR at 4, U.N. Doc. TRADE/WP.4/R.298/Rev. 1 (1984).

on an arrival notice which the consignee receives well in advance of the ship reaching its place of final destination. Used together with the proper commercial invoices, customs officials accept the Datafreight Receipt as proof of entitlement and permit the consignee to claim his shipment immediately, saving both time and paperwork. The drawback of this system is that its use is limited to a non-negotiable bill of lading.[44]

The Committee on the Simplification of International Trade Procedures of the Federal Republic of Germany (DEUPRO) completed a study concerning the possibility of replacing bills of lading by microcircuit cards (chipcards) and related security equipment. The chipcard bill of lading not only would be a fully negotiable document, but also would possess performance and security features far superior to the paper bill of lading. It would be transacted via telecommunication networks, thus maximizing the time span it would be available for trading. At the points of shipment and destination, agents or notaries operate the automats. In the presence of the transferee the shipping agent inserts the document information, which the transferror signs using his token. The signed information is then countersigned by the automat. "The automat enciphers the data so that it could not be read by anyone except the receiving automat. This concealed message is transmitted directly to the destination point. The agent on the receiving end inserts a 'blanco chipcard' into his automat, whereupon the system generates the authentication data, loading it into the chipcard with the received text. The chipcard is ejected; the agent hands it to the transferee. Under control of the sending agent and supervision of the receiving agent the document has been generated by the transferor at the point of shipment; it has been produced at the point of destination right in the presence of the transferee."[45]

The same scheme may also be applied to transactions involving an existing chipcard document. The chipcard to be transmitted is inserted into the automat; it depletes its data to the terminal; the terminal securely transmits the data to its corresponding terminal, which in turn issues the new document. The sending automat cancels the original document. The chipcard is now available for some other use.[46]

The Norwegian Committee on Trade Procedures (NORPRO) has developed a purely electronic system for the presentation of documents under letter of credit transactions. Under this system, the seller stores in his computer the terms and conditions of the credit. He may use this information when he completes the bill of lading and obtains third party statements. "It may be possible, automatically, to obtain a precise correspondence between the specification of the bill of lading and the third party statements, on the one hand, and the terms and conditions of the credit, on the other." The carrier submits a confirmation to the advising bank. The reception of this confirmation, containing the bill of lading and possible third party statements, corresponds to the present seller's handing over the documents, and constitutes the performance of the seller under the documentary credit.[47]

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44. *Id.*
45. 23 U.N. ESCOR at 10, U.N. Doc. TRADE/WP.4/R.397 (1985).
46. *Id.*
47. 25 U.N. ESCOR at 17, U.N. Doc. TRADE/WP.4/R.159 (1981).

When the advising bank receives the confirmation from the carrier, it must compare the specifications in the confirmation with the terms and conditions of the credit. Concurrently, it must consider whether the performance of the seller should be rejected due to other reasons—*e.g.*, because the seller has acted fraudulently. The comparison may be effected manually by means of, for example, printouts of video display units. A more practical question is whether the comparison may be executed automatically. In this case, advance expertise will be required.

When the advising bank has accepted the documents, it submits them to the issuing bank, which checks them in turn. If the documents are accepted, the bank will deliver them to the buyer.[48]

CONCLUSION

Automatic documentary credits have become an integral component of international trade. An examination of new practices of customer initiated services and electronic documentation reveals that the existing statutory framework is ill-suited to regulate electronic procedures, even those which are merely direct transpositions of paper-based procedures into a computerized medium. Complex legal as well as practical problems have emerged, and are gaining increased attention by national and international legal bodies. Little has been resolved; discussion, however, has been initiated. All parties have recognized the need for an overarching international system of rules governing the emergence of this new medium in commercial law. It is the hope of all parties concerned that the focus of the process of revitalization of current, inadequate regulations will be at the level of policy, and not of "superficial technical adjustments."[49] The revision to be attained is one that shall insure the validity and "vitality of the 'modern' letter of credit by assuring the realization of the reasonable expectations of its users."[50]

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48. *Id.* This system will be quite expensive to implement. Moreover, it imposes "heavy burdens" upon the carrier—burdens which may very well outweigh the benefits of enhanced security and speed. Consequently the carrier should be able to charge his customers for the specialized service. "The aggregated fees are automatically computed and stipulated in the confirmations as an encumbrance to the title of the receiver. . . . The carrier's fees are secured by a maritime lien on the goods, N.M.C. sec. 251 No. 3." *Id.* at 25.
49. Kozolchyk, *supra* note 2, at 286.
50. *Id.*

* A.B., Princeton University, 1986; J.D., Notre Dame Law School, 1989.