by the IFTMCS message, nor by any other standard message. The general terms are not transmitted in full by EDI in the IFTMCS message. They are incorporated by reference to an extrinsic source, which will or should have been notified by the carrier to the shipper; and the evidence of them is to be found there.² By this incorporation the IFTMCS messages are in this respect, therefore, like a number of waybills, and they are also like the "short form" or "blank-back" bills of lading, which do not carry the full "small-print" terms on them either. In many trades such bills of lading are entirely effective — and so is the IFTMCS message.

Document of title

- 6. The third function is the one which presents most difficulty. A negotiable bill of lading is transferable by delivery, with any necessary indorsement, and its possession gives the holder of the bill control of the goods with the right to delivery of them and to deal with them before delivery. An EDI message can have no physical "holder" as such. Who has the entitlement to take delivery of the cargo at destination must be established by other means.
- 7. Of course, if the shipper's instruction and the carrier's receipt (in EDI, the "IFTMIN" and "IFTMCS" messages respectively) identify that the latter is to be treated like a waybill (for which purpose of identification there is an allocated code), then delivery may correctly be given to the named consignee if he identifies himself. (A sea waybill does not need to be presented at the port of discharge as evidence of entitlement to possession.) If the IFTMCS is to be treated like a consigned bill of lading, the named consignee will again be the person to whom delivery should be made. He will need to demonstrate by other means that he has been authorised by the shipper to apply for delivery. Paper documents may be used for this, but so may EDI messages, provided they are used with adequate authentication and security methods

²One way of making the reference to the extrinsic source can be as follows. In the UK EDI Association's "MIG" (message implementation guideline, sometimes known as a user manual) there are quite comprehensive texts in each message's section which set out the commercial and the legal significance of the message as a whole and its individual segments where applicable. The users of this MIG are bound to acceptance of these meanings and this is reinforced, for those who have signed the Association's standard interchange agreement, by one of the clauses in it.

One of the texts which applies to the IFTMCS message is:

"The parties accept that the goods referred to in a transport Contract Status message are to be subject, in respect of their receipt and of their carriage, to the terms, conditions and exceptions which the Carrier applies in the particular trade route being used.

"These terms, conditions and exceptions are those which

- (a) are set out in the Carrier's own Waybill, or on a Waybill previously authorised by the Carrier as acceptable to him
- AND (b) are set out on the Carrier's current Bill of Lading and which are, by incorporation through (a) above, applicable to the carriage of the goods as if the Waybill in (a) above were such a Bill of Lading.

AND, if applicable

- (c) are, by way of additional qualification or exception, stated by the Carrier, in writing or by electronic transmission, to apply to the carriage of the goods.
- "A copy of the terms, conditions and exceptions applied by the Waybill, (a) above, and set out in the Bill of Lading, (b) above, may be obtained from the office of the Carrier or from any of his authorised agents."

- so as to preclude fraudulent or premature application for delivery. This process will enable the right to delivery (constructive possession; possessory title) to be withheld until, for example, the shipper or the banks³ are satisfied as to payment.
- 8. The particular problem presented by EDI is how to provide a guarantee of uniqueness (or singularity)4 equivalent to possession of a negotiable paper bill of lading. Reference has been made above to the possibility of transmitting information satisfactorily by EDI down a chain of parties. The same process can be used by any of the parties to transmit the information that he renounces his title in favour of another person. It can therefore be used to effect endorsements. However, if a person is to receive an exclusive benefit, such as possessory title, by receiving a particular EDI message, he will need to be satisfied that no identical message(s) could have been sent to any other person(s) by any preceding party in the chain, creating the possibility of other claimants to the title. Of course, in EDI no message can be actually the very same message as another; but so long as it is technically possible for a message, with no possibility of detection, to be replicated exactly and sent to someone else, there can be no guarantee of singularity.
- 9. Without this guarantee, negotiability for bills of lading cannot be provided by EDI. Passing the information, both about the cargo and about who is to receive title, from party to party may in fact be safe using EDI in particular cases, but at the moment there is no guarantee.
- 10. Until a technical solution is found and some, based on combining time-stamping and other security techniques, have come close the problem needs to be looked at from a different point of view. Methods of circumventing it have been, and are being, researched by various organisations. These depend on a "central registry" system, in which a central entity manages the transfer of title from one party to the next, cancelling the first party's rights and creating fresh rights for the second party and so on. This can be done using EDI communications. The basic principle of these systems is that all who would use them will share a universal confidence that the central registry can be trusted not to duplicate a message.
- 11. No doubt some of these schemes might provide elegant solutions to the problem, assuming that the commercial companies were prepared to take them up. Many companies have not yet appreciated that simple sea waybills (and their electronic equivalent) could be used anyway instead of bills of lading in many international transactions. It remains to be seen which of the current "central registry" schemes for emulating negotiability will prove popular.
- 12. There are, therefore, two approaches to the final problem of the "guarantee of singularity": the technical one and the central registry one. Commercial demand will show in due time which, if either, approach is sufficiently attractive to produce enough supporters to sustain development and implementation.

4. Proposal by the United States of America: note by the Secretariat (A/CN.9/WG.IV/WP.67) [Original: English]

1. At its twenty-eighth session, the Working Group noted that its recommendation to the Commission that preliminary work should be undertaken on the issue of negotiability and

transferability of rights in goods in a computer-based environment as soon as the draft Model Law was completed (A/CN.9/390, para. 158) had found general support in the

³UCP500, which sets out the requirements of banks in relation to documentary credit transactions, may, however, need amendment.

⁴In fact, two or three original bills of lading are frequently issued, stating on their face the number. Carriers are protected because delivery of the goods against production of one bill will render the others void.

Commission.¹ It was stated that related legal issues involving electronic registries were a necessary part of such a project (A/CN.9/390, para. 178).

- 2. As to the planning of future work, the view was expressed that the Working Group at its twenty-ninth session, after completing its consideration of the draft guide to enactment to be prepared by the Secretariat, could have a general discussion on negotiability and transferability of rights in goods. Another view was that the issue of incorporation by reference could also be considered at the twenty-ninth session for possible inclusion in the draft Model Law. A number of delegations expressed their willingness to prepare a brief paper to facilitate discussions on both topics. It was noted, however, that, while the Working Group might have sufficient time for a general discussion, it could not go into detail on either topic (A/CN.9/390, para. 179).
- 3. Following the twenty-eighth session of the Working Group, the Secretariat received from the delegation of the United States of America the text of a note discussing negotiability and transferability of rights in an EDI context. The text of that note is reproduced as an annex to the present note as it was received by the Secretariat.

ANNEX

NEGOTIABILITY AND TRANSFERABILITY IN ELECTRONIC COMMERCE AND THE UNCITRAL DRAFT MODEL LAWS FOR EDI

In accordance with the views of the Commission expressed at the 27th plenary session, and prior discussion of the Working Group, it is proposed that the Working Group examine the legal issues encountered in the negotiability and transferability of tangible goods in international commerce through electronic data interchange (EDI), with a view to making recommendations to the 28th plenary session as to whether such work should be continued. Achieving generally applicable or recognized rules to support negotiability and transferability through EDI could be a significant achievement by the Commission.

The following topics should be considered for initial discussion; all topics are directly or indirectly related to the subject of electronic registries, which is discussed below. It will also be necessary to discuss the relationship of proposed EDI rules with the United Nations Convention on Operators of Transport Terminals, and other relevant international legal texts.

- (a) Establishing a preliminary list of areas of commercial practice which should be included in this effort.
- (b) Draft rules for validation of agreements for negotiability and transferability through EDI of rights to tangible goods.
- (c) Criteria if any for party(ies) to be holders in due course for the transfer of rights to goods or to subsequently negotiate such rights through EDI.
 - (d) Affect on third parties with or without notice.
 - (e) Default rules for allocation of risk.
 - (f) Electronic registries (see below).

While the draft Model Law provides the necessary and basic law to facilitate EDI, it should be supplemented by the Working Group for the more complicated functions expected to be needed in electronic commerce, such as negotiability and transferability. To be able to address that, it would be useful to identify the potential uses of negotiability and transferability, which are likely to include bills of lading, warehouse receipts, leases and secured transactions, and possibly land sales and mortgages. Commodity trading, currency exchanges, bonds and securities should be dealt with, if at all, at a later stage, although legal issues related to those fields may be relevant now. Other uses could be identified as well.

Next it would be helpful to identify the areas of legal uncertainty surrounding these uses. It can be expected that each use would have its own needs, so it might be best to focus on the particular use most developed for EDI, which is bills of lading.

UN/EDIFACT is developing the message sets necessary to create an EDI bill of lading. CMI has provided voluntary rules for the use of such messaging. ICC, Paris, has sanctioned the use of electronic bills of lading in its INCOTERMS, 1990 and UCP500. So what then is lacking for the use of such bills of lading? Primarily an EDI infrastructure supported by appropriate rules which UNCITRAL may be in a position to formulate.

Even if the ocean carriers were to adopt the full set of UN/EDIFACT messages for ocean carriage, and the banking industry were to adopt messages and procedures for documentary credits, the system would still lack the legal underpinnings that would encourage negotiation and transfer in even the larger trade routes. Voluntary rules, such as the CMI Rules for Electronic Bills of Lading give way when they conflict with a State's laws. For that reason, model laws are needed that would permit or facilitate the use of EDI in establishing transfer of rights, including the use of registries as a means of documenting and supporting the transfer of goods or their enforcement is uncertain in the absence of laws formulated for this purpose.

Negotiation or transfer of any type, in the absence of paper, will require an understanding and supporting legal rules or standards as to who will be recording each transaction (and thus be able to effect the negotiation or transfer), what are the default standards for allocation of risks, and that the procedures are supported by, or at least are not contrary to, a State's laws which can be harmonized as to international transactions.

Three concepts of registries might be governmental, central and private. There may be other types that should be considered as well, but these three may be thought of as:

- 1. Governmental: an agency of the State records transfers as public records, and may authenticate or certify such transfers. Such a registry is important for high-value property such as ships, aircraft, land transactions etc. For public policy reasons, the State is usually not liable for any errors, and the cost is borne through user fees.
- 2. Central: where a commercial group conducts its transactions over a private network (such as SWIFT), accessible only to its members. This type of registry is needed where security and speed are critical. Its limited access permits party verification to be done quickly, facilitating speed and enhancing security. Access to the actual records of the transactions are usually limited to the users, but summaries of the transactions can be reported publicly in summary form (as in securities trading). The rules of the network usually govern the liabilities and costs. International rules or a model law to support the transborder application of such "system rules" is needed.
- 3. Private: conducted over open networks, where the issuer of the document (or the party having responsibility for delivery of the subject of the transaction) administers the transfer or negotiation process (as in the CMI Rules for Electronic Bills of Lading). The records are private, and the costs may be borne by each user. Liability parallels the present practice with paper, in that the administrator is obliged to deliver to the proper party unless excused

¹Official Records of the General Assembly, Forty-ninth Session, Supplement No. 17 (A/49/17), para. 201.

by another party's error, in which case local law may apply. This method avoids building added complexity and cost to transactions not presently done over central registries, but would also need international rules or harmonization through a model law, at least as to transborder cases.

A table of characteristics of these registries is enclosed.

In negotiation or transfer, as they presently exist, some party or system must stand behind the document issued and verify its authenticity. That function is in part likely to be filled by an electronic registry in EDI. It should be borne in mind that what is being "transferred" is not the paper or EDI message (that being just the medium), but the rights and/or title to the subject of the transaction.

Accordingly, a model law to guide the creation and use of registries, and to provide default standards for allocation of risks

in the use of registries, particularly for bills of lading* should be the goal of this Working Group.

The types of registry contemplated by supporting rules should be appropriate to the type of transaction to avoid overcomplexity and/ or extra costs, lest the effect be to discourage the use of such processes. Security should be appropriate to the types of transaction, and consistent with the model laws. Apportionment of risks would need to be addressed, taking into account commercial customs and practice, local law, and model international laws and rules, such as that currently under preparation by the Working Group, taking special care not to discourage commercial uses of EDI.

^{*}An area not well defined by the Hamburg Rules or other cargo liability schemes is the resolution of disputes arising out of the bill of lading itself. While possibly beyond the scope of this Working Group, the need for better definition in this area will, no doubt, become apparent as we explore these issues.

Registries			
	Government	Central	Private
Purpose Access	Record	Transfer and record	Transfer
	Public	Members	Private
Administrator	Government	Third Party	Issuer
Costs	User fee	Membership	Internal
Insurance	None	Network	Party
Allocation of risk	On user	On user	By law, custom or agreement
Security	Moderate	Highest	As needed
Uses	Real estate (deeds, and mortgages), leases, secured transactions	Securities, commodities, bonds, money, foreign currency	Bills of lading, warehouse receipts, cotton receipts

E. Draft Model Law on legal aspects of Electronic Data Interchange (EDI) and related means of communication: compilation of comments by Governments and international organizations (A/CN.9/409 and Add.1-4) [Original: English]

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