

The Use of Contractual Structures to create International Legal Frameworks for Electronic Commerce

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Introduction

Bolero International Limited has developed a system that allows parties involved in international trade to exchange trade documentation in an electronic environment. One of the key elements of the Bolero System is the legal infrastructure that underpins its use. This paper outlines the principle characteristics of that legal infrastructure and the process by which it was determined. It looks at some of the business and legal risks that arise and the steps taken to ameliorate such risks. It concludes by looking at some of the considerations in approaching the establishment of contractual structures for other cross-border uses.

Why bother?

Before considering these issues it is worth taking a few steps back and examining the economic drivers for the adoption of an electronic trade documentation system. Whilst the following drivers (and their associated statistics) are specific to trade documentation, similar types of benefits are available when electronic commerce is used for other purposes. The data in trade documentation is not the only data that will cause delay, risk and, thus, cost if it is inaccurate or error prone.

The annual volume of world trade increases at a high rate and notwithstanding the current global economic downturn is set to continue to grow as businesses drive down

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costs by sourcing from the lowest cost producers and governments make considerable economic and political efforts to ensure that producers in their jurisdictions are able to offer goods and services as freely as possible (for example China's accession to WTO required radical changes to laws and processes in China). In a competitive environment where customers are increasingly flexible in whom they buy from and by what method and are price knowledgeable as well as price sensitive, small percentage differences in cost mean the difference between profit and loss. Margins are reducing. The following statistics highlight this in relation to trade documentation.

- Total values of Global Trade: \$57bn (1947); \$3.58Tr (1992); \$5.8Tr (2001); \$6.75Tr (E2005)²
- An estimated 7.2% of all Global Trade is lost in Paper in efficiencies³; The \$420bn lost per Year compares with the total Corporate spend on Advertising each Year (U\$450bn)⁴
- The Cost of processing a traditional Purchase Order runs at approximately \$50 (Paper); \$2.5 (EDI); \$1 (Internet)⁵
- Average time spent re-ordering an Inventory Item: 3.7mins (Mail); 1.6mins (eMail); 0.3mins (EDI)⁶ The simplest International Trade Transaction has a minimum of 12 individual Participants, each of which has a different role and different documentary requirements⁷ The Error Rate in re-keying Information

² Financial Times 2000

³ WTO/UN 1996

⁴ McCann-Erickson 2000

⁵ SITPRO April 2001

⁶ McKinsey 2000

⁷ Brown Brothers Harriman April 2001

has been shown to be as high as 50% for some documents i.e. at least 50% of documents have at least a single error on them.⁸

- 70-80% of a Commodity Trader's Staff are dedicated to handling paper, accounting and billing on paper trails⁹ Most of the financing banks have overhead Costs running between \$300-400k per year for an average size Commodity-financing Institution¹⁰ Interaction Cost Savings during Shipping are as follows: Haulage/Carriage (2.5%); Order Processing (13.8%); Management/Accounting (13.8%); Shipper Interaction (12.5%); TOTAL 42.6%¹¹

The most surprising statistic is the error rate for documentation that requires re-keying. The impact of this is not cost alone. There is also risk caused by the delay whilst the error is rectified. In certain cases the delay is commercially unacceptable and new documentation is issued notwithstanding that the originals have not been returned. This introduces a different type of risk where bills of lading are involved. A carrier is under an obligation to deliver up the cargo represented by the bill of lading to the party presenting that bill of lading to the carrier. If there is more than one bill of lading representing the same cargo the carrier will be unable to comply if a second party holding a bill of lading also demands delivery. Fraudsters have exploited this process.

Bolero- a brief overview

⁸ See footnote 5

⁹ See footnote 7

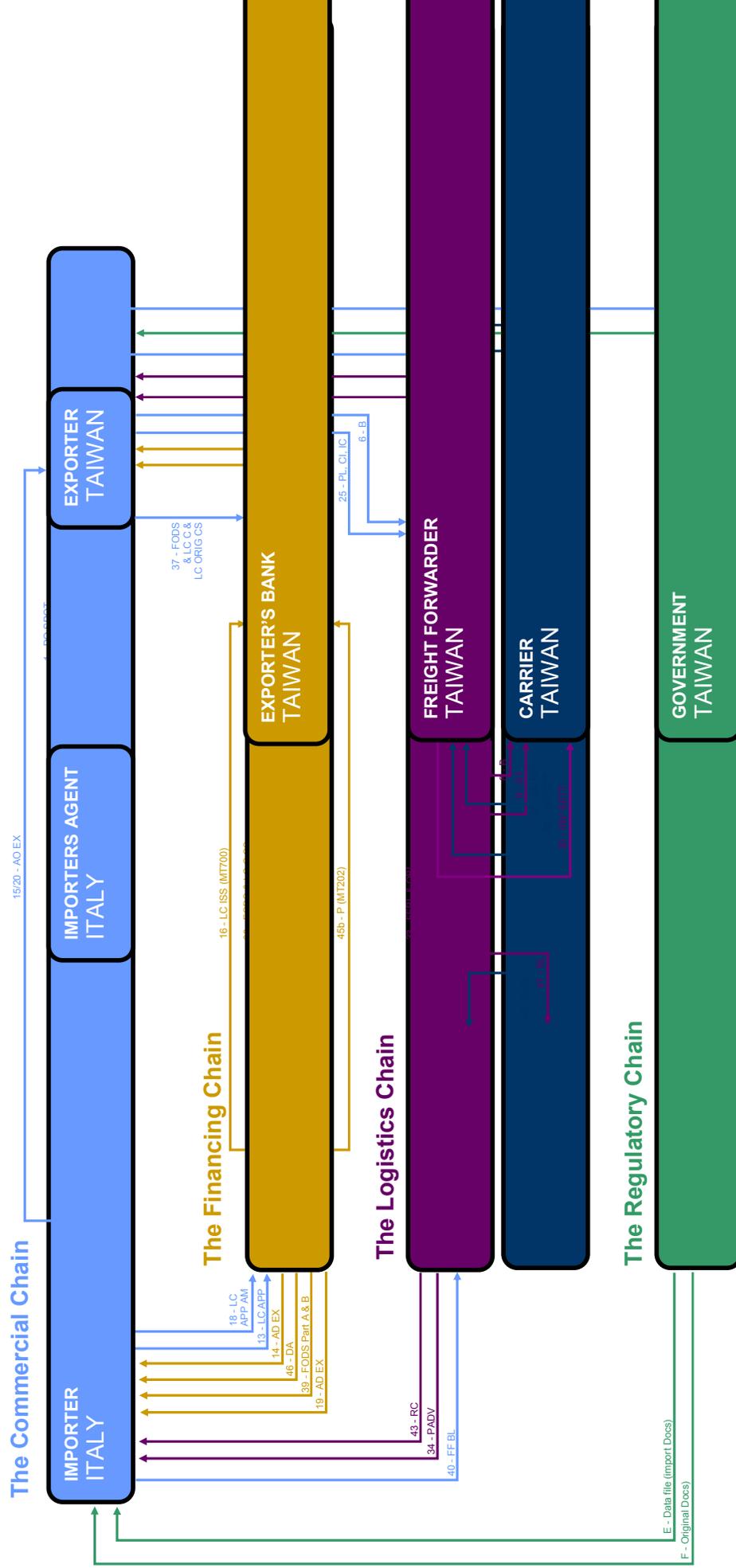
¹⁰ See footnote 7

¹¹ See footnote 6

A typical international trade transaction involves a minimum of 12 individual participants. In addition to the buyer and seller, the obvious additional parties are the parties who move the goods (carriers) and financial institutions (one each for the buyer and seller at least) providing services for the parties to settle their transaction. In addition, a plethora of other parties are involved and each produces its own documentation (insurance certificates, export licences, certificates of quality, quantity, origin) or requires other parties to produce documentation to them (e.g. customs). Many of these parties deal with each other and the resulting picture of the documentary flow can become very complex (see fig 1).

Bolero acts as a sort of clearing house for these documents which in the more traditional environment would move on a bi-lateral basis in a variety of formats through a variety of systems (letters, telex, fax, EDI Messages and, progressively unstructured email messages). Where electronic means of communication are used this is invariably on a bi-lateral and proprietary basis.

Figure 1. Documentary Complexity in an International Trade Transaction



Bolero creates a standard environment using XML documents. These documents are sent in messages which are digitally signed by the sender and are sent via Bolero platform to the intended recipients. In addition to this basic messaging functionality which in simplistic terms is a highly secure and structured messaging system, Bolero offers two value added applications. The first of these, known, somewhat misleadingly, as the Title Registry, is a database which records rights to Bolero's electronic versions of bills of lading and allows entitled users to transfer such rights to other entitled users in a way which replicates the flow of a paper bill of lading. And, secondly, SURF which again in very simplistic terms enables the settlement processes (documentary credits, collections and open account) related to the sale and purchase agreement to be completed electronically (electronic submission of compliant electronic trade documentation results in payment or an obligation to pay). A key feature of the Bolero System is the Rulebook¹² a multi-lateral contract signed by each party sending messages over Bolero. This contract characterises the legal meaning of the sending of electronic messages through Bolero and contains very specific provisions in relation to the transfer of rights and obligations (in relation to the Title Registry and SURF).

An important decision was made early on in the development of Bolero and that was that the Bolero solution would, as far as possible, seek to replicate the legal relationships and results that would apply if traditional documentation was used. This commercial decision was based on the widely held view amongst the constituency of

¹² Available on-line at <http://www.boleroassociation.org/downloads/rulebook1.pdf>

putative Bolero users that to modify those relationships and results would cause considerable difficulty in adoption and to the extent that one or more parties was disadvantaged would create an immediate barrier to adoption. It is worth remembering that the co-operation of a variety of parties performing a variety of functions is required for an international sale of goods to proceed smoothly.

A further important point to note is that Bolero is a dematerialisation system as opposed to an immobilisation¹³ system (the electronic messages do not derive from the paper documents - no paper documents are created).

Evolution of the Bolero Contractual Model

Prior to describing how the model evolved there are a few important observations to be made.

- ***Law tends to lag, not lead.*** This is particularly the case in commercial activities where legislators have, in my experience, the tendency to get involved when they wish something stopped or to prevent abuse (e.g. various enactments relating to unfair contract terms).

¹³ Immobilisation systems rely on a custodian taking charge of a document and the allowing the rights represented by that document to be traded electronically. For an example see Euroclear www.euroclear.com/eoc/level0/MA12E.pdf page 15 for a brief overview.

- ***Custom and practice of merchants.*** Since time began, businessmen have made deals and other business will see opportunities to make further deals of a similar nature involving similar procedures or indeed to use the subject matter of the deal to create a whole new deal. Consistency in these deals means that they can be replicated with other parties with ease and the transactional costs are kept to a minimum. There is no value in re-inventing the wheel unless it is stronger/faster etc.
- ***Statutory recognition for established custom and practice.*** Two good examples of statutory law following the custom and practice of merchants come from the trade sector. They are the Bills of Lading Act of 1855 and the Bills of Exchange Act of 1882. Both of these English Acts of Parliament effectively brought statutory force to the law (part contract, part custom and practice) for these documents that had been in use for centuries prior to that. Interestingly, in the case of Bills of Lading, this Act was replaced in 1992 as a result of a growing number of cases, provoked principally by the major development in the law relating to torts under English law. Major developments to the law relating to torts took place well after the original Act.
- ***Voluntary 'Regulation'.*** There has been a growing tendency for terms and conditions to be adopted following development on a voluntary basis.

Particularly where there is an international dimension.¹⁴ These have worked well where it has been a codification exercise. They have fared far less well when they have been developed to meet a perceived need PRIOR to the businessmen working them through. They are also often used to fill in the gaps deliberately left by legislation (e.g. market rules and regulations). At the top of this ‘tree’ are the international conventions ‘supra national legislation – in the Trade field – e.g. Vienna (International Sale of Goods) Hague & Hague Visby (Sea Carriage Convention) Warsaw (Air Carriage). The purpose of the international conventions being to bring uniformity cross-border.

- ***Speed of adoption.*** Conventions, legislation and commercial codification take a long time. This means that those responsible for their preparation tend to try and prepare them in such a way that they will not become obsolete. This is often done at the expense of detail (which might change) or for political reasons. In any event even fairly basic rules relating to ubiquitous methods of doing business are still not in place and cause uncertainty¹⁵.
- ***The need for specificity.*** As we know, it is important to be specific in contracts, particularly in jurisdictions where literal interpretation is the norm. Technology and the speed of communication mean that new ways of doing business are emerging all the time and in many cases the ability of merchants

¹⁴ E.g. UCP 500, INCO Terms, standard terms for cargo insurance

¹⁵ E.g. The rights of an interested party to make a claim for loss of or damage to goods under a cargo insurance policy

to develop a custom and practice to keep up with this is outstripped by the next new thing. If the processes used are iterating continually there will be no established custom and practice of merchants which typically requires some years and breadth of acceptance before a court will accept it as such

Recognising these issues, Bolero needed a contractual solution. The size of the transactions and the nature of the participants (large international banks, big corporates, major shipping and transport companies) meant they would not transact business without assurance of the legal results. The key challenges for Bolero in creating the legal structure were

- The need to ensure that the contractual solutions devised were acceptable in at least the major senior commercial jurisdictions. The solution needed to be effective internationally.
- Dealing with the wide variety of parties required to conduct an international trade transaction. The solution needed to be acceptable to parties performing different functions each with their own requirements and expectations.¹⁶
- Handling multi-lateral relationships. This is because documentation issued by one party to another is often used by a third party. Indeed, a strong

¹⁶ Contrast the needs and expectations of a multi-national trade bank with a family owned textile exporter.

commercial (if not necessarily contractual) relationship will evolve between parties offering services to the same customers.¹⁷

- The Bolero System transfers rights and obligations. Whilst desirable, a contractual structure would not be essential if the system were simply passing information between the parties. The transfer of a Bolero Bill of Lading does create a contract between the carrier who issued the document and the person to whom it has been transferred.

Furthermore, the body of law supporting, inter alia, the transfer of rights and obligations in connection with a bill of lading was well developed (plenty of legislative activity and precedent through a huge amount of litigation). The requirement for specificity meant that the media for accomplishing the functions is laid out within the various conventions, statutes and in precedent.¹⁸

How Bolero built its Contractual Model

As the 'media' of the documentation was the subject of much existing law, we recognised at the outset that this was one of the major challenges in replicating the legal results in an electronic environment. We undertook a major international survey

¹⁷ Settlement processes in international trade often require a seller to provide documentation issued by third parties (carrier's bill of lading, surveyor's certificate of quality etc) as a condition of payment.

¹⁸E.g. Hamburg Rules Article 1.7 defines a bill of lading as "a document which evidences a contract of carriage by sea, and the taking over and loading of the goods by the carrier, and by which the carrier undertakes to deliver the goods against surrender of the document". See also Carriage of Goods by Sea Act 1992.

to establish whether there would be any fundamental problems with attempting to do this.

There are in excess of 300 different legal jurisdictions in the world and the time and cost of surveying each was prohibitive. We selected the key commercial jurisdictions and a selection of other jurisdictions such that we could perform what is known as a global approximation.

A relic of earlier times was the export of legal rules. Legal imperialism.

Unsurprisingly, there are similarities between English law and the law in Australia, Canada (apart from Quebec) India and other parts of what is or what was the British Commonwealth and between Spanish law and the law in many South American countries.

There are seven basic legal systems and most jurisdictions fall into one of these legal systems:

- English Common Law
- American Common Law
- Mixed Roman/Common Law
- Germanic/Scandinavian
- Mixed Napoleonic/Germanic

- Napoleonic
- Islamic

Relatively few important jurisdictions do not fall into one of these categories¹⁹

The results in one jurisdiction bearing the same jurisprudential roots as another can be used to predict the outcome, or rather point to potential problem areas. Importantly for Bolero it gave us a very good guide as to how we should seek to replace paper documentation with electronic messages.

We tested our hypotheses in the trickier jurisdictions (those that have the strongest formalities –Napoleonic/ Germanic.) The transfer of rights and obligations presented the most difficult problems.

In drafting the Rulebook contract we recognised the following principles as our guide.

- ***Light v Heavy.*** Whilst there is a superficial attractiveness to a fully comprehensive solution, the more we researched, the more we realised that a solution which attempted to introduce/impose methods of doing business beyond our remit would be unacceptable to all but the smallest of users.
- ***Preserve the balance.*** Whilst certain groups stood to make more than others, the creation of a natural enemy was a clear thing to avoid.

¹⁹ Major exceptions, PRC and countries from the former Soviet Union

- ***Resist demands for extra functionality.*** One particular corporate wanted the system to tell it where the goods went after that corporate had sold them on. As this company was very active in the trading arena it was pretty clear why they wanted this information. We made it a policy not to advise anybody who doesn't already know in the paper world.
- ***Certainty.*** In legal terms there is no such thing, but the aim in drafting was to create the same degree of certainty as would be found in the paper world, i.e. not increase a businessman's legal risk if he switched to electronic documents.
- ***Extensive consultation.*** There was a strong will to make Bolero happen so we had the benefit of extensive criticism and contributions from all a wide range of putative users and interested organisations. This improved the quality of the legal and the technical product, gave those who participated a detailed understanding of Bolero's product and facilitated 'buy-in'.

Notwithstanding the very careful way that development was thought through there were areas of risk. Many of these were addressed in the survey and subsequently cleared but it was important to understand what those issues were at the outset.

Areas of Legal Risk

Space and time prohibit a full legal risk analysis here but the key areas are as follows:

Regulatory. The requirements made by authorities responsible for the import or export of goods (typically Customs Authorities) are understandably strict. Most still require at least some paper documents. Fortunately, many such authorities are drowning in paperwork and are keen to find ways in which the administrative burden can be reduced. Typically, the response from such authorities has been pragmatic – as soon as a major organisation has expressed a desire to provide electronic documents to a customs authority the customs authority has usually been keen to participate. There remains a risk, however, that some authorities will simply refuse to participate.

Another area of regulatory activity relates to the use of digital signatures, principally because the technology used to create digital signatures can be used to generate almost unbreakable encryption posing issues from a national security perspective. Bolero uses digital signatures for security, message integrity and identification purposes. In most cases, governments have sought to encourage eCommerce and enable digital signature use and the regulatory environment is much more favourable than five years ago.

Validity. As referred to above, many laws require documents to be ‘in writing’, ‘original’, ‘signed’ and other descriptions, which imply a physical media. Indeed, the meaning of the word ‘document’ meant ‘written instrument, official paper’. Whilst

there have been many recent enactments²⁰ (many applying or deriving from the UNCITRAL Model Law on Electronic Commerce, 1996) which permit most documents to be in electronic form, there are certain types of documents that are invariably excluded (negotiable instruments, guarantees). The Rulebook, by ensuring that the users have agreed to deal in documents in this form, goes some way to closing the gaps and specific provisions relating to certain types of documents purport to ensure that even if the traditional method of documentation is required to be in writing that its functional equivalent in electronic form does not.²¹

Evidence. Again the climate for the admissibility of evidence has improved considerably in recent years but there remains a risk that a court will not recognise electronic messages. The Rulebook contains the following provisions on evidence:

2.2.3. Messages as Evidence

(1) Admissibility. Each User agrees that a Signed Message or a portion drawn from a Signed Message will be admissible before any court or tribunal as evidence of the Message or portion thereof.

(2) Primary Evidence. In the event that a written record of any Message is required, a copy produced by a User, which Bolero International has authenticated, shall be accepted by that User and any other User as primary evidence of the Message.

(3) Authenticated Copies to Prevail. Each User agrees that if there is a discrepancy between the record of any User and the copy authenticated by Bolero International, such authenticated copy shall prevail.

²⁰ E.g. the Uniform Electronic Transactions Act 1999. A very useful reference on eCommerce regulation can be found at www.bakernet.com/ecommerce that details legislative enactments and developments in most countries.

²¹ In some jurisdictions a bill of lading is required to be in writing. Bolero calls its bill of lading equivalent a Bolero Bill of Lading (BBL). The general view held in most jurisdictions is that a BBL does not fulfil the form requirements to be a bill of lading. Thus, whilst it provides the same functionality as bill of lading because it does not fulfil the form requirement and thus is not required to be in writing. The position would be somewhat different if the law required a bill of lading to be issued. Fortunately, this does not appear to be a requirement. (See Hague-Visby Rules that require the carrier to issue a bill of lading to the shipper but only if the shipper demands one.)

By this method, the parties are agreeing that the issue of messages as evidence is substantive (as opposed to procedural) so a court looking at admissibility of a Bolero Message as evidence would be required to apply the English law interpretation (the Rulebook is subject to English law). Whilst there is confidence that this will prevail, there remains a risk that a court will ignore these provisions, determine that these are subject to the court's rules on evidence which may not admit such messages as evidence. A user may risk an injunction in a English court by advancing such an argument but he may decided that to be a risk worth taking if the circumstances so permit.

Transferability (under Bolero Bills of Lading). The ability to transfer rights and obligations presented our most difficult challenge. Until the enactment of the Carriage of Goods by Sea Act 1992, there was no common agreement under English law on the legal mechanics of how a party to a bill of lading other than the shipper was able to claim delivery of the goods from the carrier subject to the terms and conditions of the bill of lading (i.e. other than the statute said it did). Various methods of transferring rights and obligations were examined, the most obvious method of transferring rights (assignment) had to be discounted as in some key jurisdictions assignments were required to be in writing. The solution adopted combines attornment (by the carrier as independent bailee of the goods) combined with a novation of the contract of carriage (the carrier being the continuing party and the

new holder of the Bolero Bill of Lading stepping into the shoes of the previous holder). Novation was a construct established under Roman law so is understood in all senior commercial jurisdictions (although not commonly used in civil jurisdictions as issues of privity of contract rarely if ever arise).²²

Jurisdiction. The Rulebook is subject to English law but is subject only to the non-exclusive jurisdiction of the English Courts. In a perfect world, exclusive jurisdiction would be preferred. However, because the underlying contracts between the parties continue²³, and are likely to be subject to a wide variety of jurisdictions, it made no sense to insist that part of the contractual relationship between parties to a dispute should be subject to a single jurisdiction. Certain jurisdictions are known to either disregard foreign law clauses or to apply them somewhat half-heartedly so there remains a risk that a court will arrive at a different interpretation. This is not seen as a risk in senior commercial jurisdictions but may be problematic in jurisdictions where there is not a mature body of law dealing with cross-border commercial law issues.

Business/Legal Risk

In addition to the party-to-party risks relating to specific messages or series of messages, which go to make up a particular transaction, there are a number of other legal risks that arise under the Bolero System.

²² See <http://www.bolero.net/downloads/bbls.pdf> for a simple explanation of how Bolero Bills of Lading work.

²³ The Rulebook contract does not specify the terms of these underlying contracts (contracts of sale, contracts of carriage etc), it simply makes those contracts work in electronic form.

Competition/restraint of trade. In establishing the Bolero System one of the key areas of risk for the operator was the risk of claims arising for refusal to allow access to the Bolero System (either at all or, and potentially more serious, denial of service once established). In order to avoid such claims, the Bolero Association is responsible for allowing organisations to use the service (and for removing the ability to use if a user has acted in a way, which is detrimental to other users or of the Bolero System as a whole). The performance of these functions is set out in a standard form contract between the Bolero Association and each user.²⁴ The Bolero Association is a not for profit company limited by guarantee. Unlike Bolero International Limited, which is owned by SWIFT²⁵, TT Club²⁶ and a number of venture capitalists, the Bolero Association is owned by the users of the Bolero System who are thus members of the company and its Board is drawn from its members. It maintains a separate office and staff although it meets with the operational company on a regular basis. Thus, the risk of restraint of trade and competition law is dealt with by fellow users and is subject to rigorous processes. Discretionary decisions are kept to an absolute minimum and disciplinary matters are subject to the rules of natural justice.

Security and Confidentiality. An important issue for many users is the security and confidentiality of the information and data that passes through the Bolero System. The sensitivity is at both a private and a public level. Users expressed concern that regulators seeking information that they could not lawfully demand from the sender

²⁴ See Bolero Association Service Contract http://www.boleroassociation.org/downloads/bal_sc.pdf Clause 4 and Appendix 1.

²⁵ Society for Worldwide Interbank Financial Telecommunications

²⁶ Through Transport Mutual Insurance Association Limited

or receiver of the information might attempt to gather such information direct from Bolero. There is a relatively low risk of this happening, but nevertheless, the contract that Bolero International has with each user is crafted to minimise this risk.

Priority of Agreements. The Rulebook is intended to take priority over other agreements on the matters it deals with. However, as the underlying contracts continue to exist there is a risk that users may purport to vary the Rulebook on a party to party basis. Other than to highlight the possible dangers there is little that can be done to prevent this happening. A Clause paramount could quite easily be sidestepped by a subsequent bi-lateral agreement asserting itself to be paramount.

Changing the Contract. Whilst considerable efforts have been made to ensure that the Rulebook accomplishes what it sets out to do there is no such thing as perfection. In any event the Rulebook will need to evolve over time to reflect changing laws and practices. The Bolero Association acts as the common intermediary for the signature of the Rulebook, ensuring that each user is bound to every other user under the terms of the Rulebook and the Bolero Association is also responsible for administering any changes to it.²⁷

Whilst this process has been carefully developed, there remains a risk when the change over from the old to the new takes place and the risk of bi-lateral variation²⁸ is

²⁷ See foot note 24, Clause 3 and Appendix 2 of that contract

²⁸ Two parties decide to continue between themselves 'as if' the changes had not been made.

heightened. There has yet to be a change to the Rulebook, which has been in existence for almost three years, and it is anticipated that changes will be few and infrequent. However, great care will need to be taken when such changes are made.

Cultural and Behavioural Risk. These are not legal risks per se but are often cloaked as such. Whilst the Rulebook attempts to provide certainty on at least an equivalent basis to the results that would arise if traditional documentation had been used, there are likely to be areas where the Rulebook provides greater certainty,²⁹ there are also areas where the Rulebook, at least initially will be less certain.³⁰

The root of the general concern that occasionally manifests itself in vague ‘legal concerns’ is the fear of change. (In fact, this is diminishing as a reason as the Rulebook and the approach it takes becomes more widely accepted³¹) Individuals embrace new ideas but worry and thus resist change. We have seen many examples of requests for documents being made where the need for such documents disappeared many years, even decades ago. The reason given is that such documents ‘have always been required’.

²⁹ E.g. the ability of a user to review terms and conditions applying to a contract (especially a Bolero Bills of Lading) before a user becomes a party to it. Furthermore, if there existed a high degree of certainty in the laws in this area the amount of litigation would be considerably lower.

³⁰ The Rulebook will be novel to a court or tribunal used to reviewing paper documentation and to counsel acting for the parties.

³¹ 'Electronic Commerce and International Transport Service' UNCTAD Secretariat, 31 July 2001, paras 12 ff. (TD/B/COM.3/EM.12/2). Also by the English Law Commission examination "of the current law for domestic and international law reform with a view to assisting the development of domestic proposals and to making recommendations of additional reforms necessary to facilitate electronic commerce" (Law Com No 274, 2001)

Behavioural and cultural risk can be minimised, as the community using the system grows larger. The willingness to make the necessary investment of time and intellect is often linked to the commercial benefits that will accrue. Trade documentation processes are complex and any modifications to such processes, particularly where they simplify such procedures are themselves complex and need to be explained and understood. It should be remembered that simpler, safer systems require less personnel so concerns or lack of enthusiasm can often be linked to very personal job security issues. The fact that this will free up resources to perform more interesting and productive work is attractive to a CEO but, on the ground of uncertainty, less attractive to those currently performing the documentary functions.

Finally, inefficiency itself produces business opportunities and simpler safer processes coupled with increased transparency is not necessarily a benefit for businesses that have thrived on assisting others to handle the traditional complex processes. I have seen companies from both sectors take a number of approaches to this commercial 'threat' ranging from ignoring and hoping it goes away or outright hostility to genuinely embracing the idea, recognising that adapting and changing to new technologies will create yet more opportunities.

Other Uses for Contractual Structures in eCommerce: Issues

Rather than explore the many possible opportunities for other eCommerce vehicles that may need or benefit from standardised multi-lateral contractual relationships (which is in the domain of the entrepreneur rather than the lawyer). The following are some of the issues that need to be considered:

Voluntary versus Required (Regulated). Very different issues arise depending on whether commercial interests are driving the initiative or whether they are being compelled to participate by a regulator. A voluntary system requires a strong business case; the days of the eCommerce 'vision' initiative or sale have been over for some time. Moreover, the benefits case for an eCommerce initiative will be heavily discounted because of recent market experience. The contractual structure will need to be very carefully thought through to ensure that the balance between participants' legal rights and obligations is preserved. As with the commercial interests, a levelling of the playing field will not be attractive to a participant that currently holds an advantage.

A system brought in by a regulator (for example to deal with a perceived systemic problem) will require the 'buy-in' of the market leaders. There are so many ways to slow down or block that the failure to secure such buy-in will result in failure and sanctions will not help a great deal. Regulators would be advised to resist the temptation to use the opportunity to do more (i.e. collect more information) than is necessary to achieve the main objective.

Neutrality and Trust. The absence of these features and contractual or governance provisions to ensure them will be a major inhibitor. Commercial enterprises are very reluctant to create a key business dependency and even less reluctant to put data through a system where these features are missing.

Complex and Time sensitive. The combination of these two factors will be key to establishing whether there are solid business reasons for establishing an eCommerce

system. Any legal structure underpinning its use will need to address these issues. Complex transactions are usually expensive and opaque to all but the most knowledgeable players who have created a business from their knowledge and understanding of market practices. Also, the more complex the process, the more error prone it becomes. Inaccurate/inconsistent data input and/or processing are the main cause of errors. The more error prone, the more opportunity for abuse. Time sensitivity in a business process creates a pressure that is accentuated by any errors. If speed is important, errors will delay and processes have evolved to deal with the most common problems.³²

Observations in closing

An increasingly competitive and international marketplace³³ coupled with increasing price sensitivity means that there is commercial pressure to come up with innovative and efficient ways of doing business. This is coupled with an increased sensitivity to administrative, financial and legal (particularly regulatory) risk. The Internet is a relatively low cost utility that through its global reach encourages innovation (indeed it appeared a little too easy/attractive for a period of time). As a consequence, new ways of doing business are emerging all the time. Developments in law (both statutory and by acceptance through custom and practice) are slow compared to the speed of technical and business process innovation. If these new ways of doing

³² E.g. Consignees frequently provide carriers with a letter of indemnity if a bill of lading has not arrived before the carrier is ready to discharge and deliver cargo. Abuse of this process is common.

³³ E.g. the foreign trade component of the US economy is growing. Since 1990, exports have risen from 8.6% of GDP to 11.6%, while imports have increased even more, from 9.4% of GDP to 16.0%.

business are to be accepted by the business community there is a need for these to have predictable legal results and thus a need for greater use of contractual structures, particularly where there is an international dimension. Lawmakers have role to play however in making these easier by facilitating the use of technology on a generic basis and, in the main, they are meeting that task.