



Asia - Pacific Economic Cooperation

Final Report

**Paperless Trading Demonstration Project - Electronic
Transmission of the SANCRT Message**

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**Paperless Trading Demonstration Project -
Electronic Transmission of the SANCRT Message**

This report was prepared by Dialectrics Pty Ltd in conjunction with Murray Goulburn Co-operative Company Limited, "Murray Goulburn", assisted by the Australian Quarantine and Inspection Services, "AQIS", in accordance with the APEC tender TPT 01/2001T.

This is the **third** and final of the **three** reports required under that tender.

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Project Summary

Various institutional barriers to the removal of paper requirements used by the dairy industry in international cross-border trade within APEC have been identified. Demonstrations of the electronic Health Certificate, “E-cert” have been conducted. The suggested solutions acknowledge those barriers and are based on the experience gained while conducting the demonstrations.

The project has been based on Australia as the ‘exporting’ economy. The selected ‘importing’ economies, in alphabetical order, were Canada, Japan and the USA. The basic common documents required for cross-border trading in dairy products between these economies were determined. Specific documents that are not immediately ready to be conveyed by electronic means are: Bill of Lading, Sanitary /Phyto-Sanitary or Health Certificate, Certificate Of Analysis, Inspection Certificate.

The concept of ‘layering’ or ‘stratifying’ the documents in terms of government-to-government, business-to-business and financial-to-financial use was considered. However due to the differing interrelationships of these various groups in the economies and the sometimes dissimilar use of the same document, this approach was not extensively pursued as it appeared to offer no broad practical solutions for APEC.

Cross-border trading in dairy products, similar to most products, is considered to be essentially a matter of timing between handing over title to the goods and payment. Many other underlying factors such as “trust” are obviously necessary. Trust is essential to guarantee quantity and quality of the goods plus ensure payment is made.

To better guarantee successful transactions, certification may be sought from outside bodies. This leads to production of documents aimed at satisfying organisations involved in the ‘supply chain’ and who are responsible and accountable to uphold the integrity of the transaction. Hence “risk management” is a key aspect and the type of product being traded will dictate the complexity or level of documentation demanded.

Risk management is a very broad topic and usually impacts to various degrees on the governing bodies in an economy. Thus the “Customs” authorities are usually required to ensure that the correct regulations for their economy are met.

The Health Certificate typifies such documentation and was an excellent example for the demonstration, as it is supported by, and impacts, both business organisations and government agencies. The project demonstrations were conducted using the electronic “E-cert” as a potential solution to the removal of the paper Health Certificate. The “E-cert” was originally developed by the New Zealand Food Safety Authority and is now jointly promoted with the Australian Quarantine and Inspection Service, AQIS.

The first stage of the project predominantly examined the Australian export processes; the documents needed to be prepared for the three selected economies. The second stage more closely analysed the importing processes using the practical demonstration of the “E-cert” to track the paths from the originating authority of an economy’s requirements through to practical usage of the “E-cert” in the field along their ‘supply chain’.

The demonstration of the “E-cert” was initially focussed on the Regulatory and Customs controllers in the three economies. It was rapidly discovered that the main recipients of the ‘set’ of export documents were the major freight forwarding companies in each of the economies, namely; Livingston International (Canada), Nissin (Japan) and DHL Danzus (USA). It was noted that the roles of these commercial companies were a key to any proposed adoption of “paperless trading” utilising electronic communication.

It was also concluded that the “E-cert” is a specialist document in the total ‘set’ of documents needed to progress shipments through a supply chain. As an individual document in an electronic form, directed in this case at government to government communication, the “E-cert” offered no advantage to other, non-government, organisations in the supply chain. When used only in the role of government communications, the “E-cert” would be removed from critical organisations, such as banks, where it is often mandatory for processing payments.

Thus when seeking to remove paper requirements from the supply chain, the overall ‘set’ of documents must be considered as they provide essential information to the ‘supply chain’. The actual composition of the ‘set’ of documents varies according to additional optional documents or variations to the base documents required by the trading economy or importer. The quantity may range from 6 documents to greater than 20. Further, the use of each document may vary depending on the importing economy’s requirements.

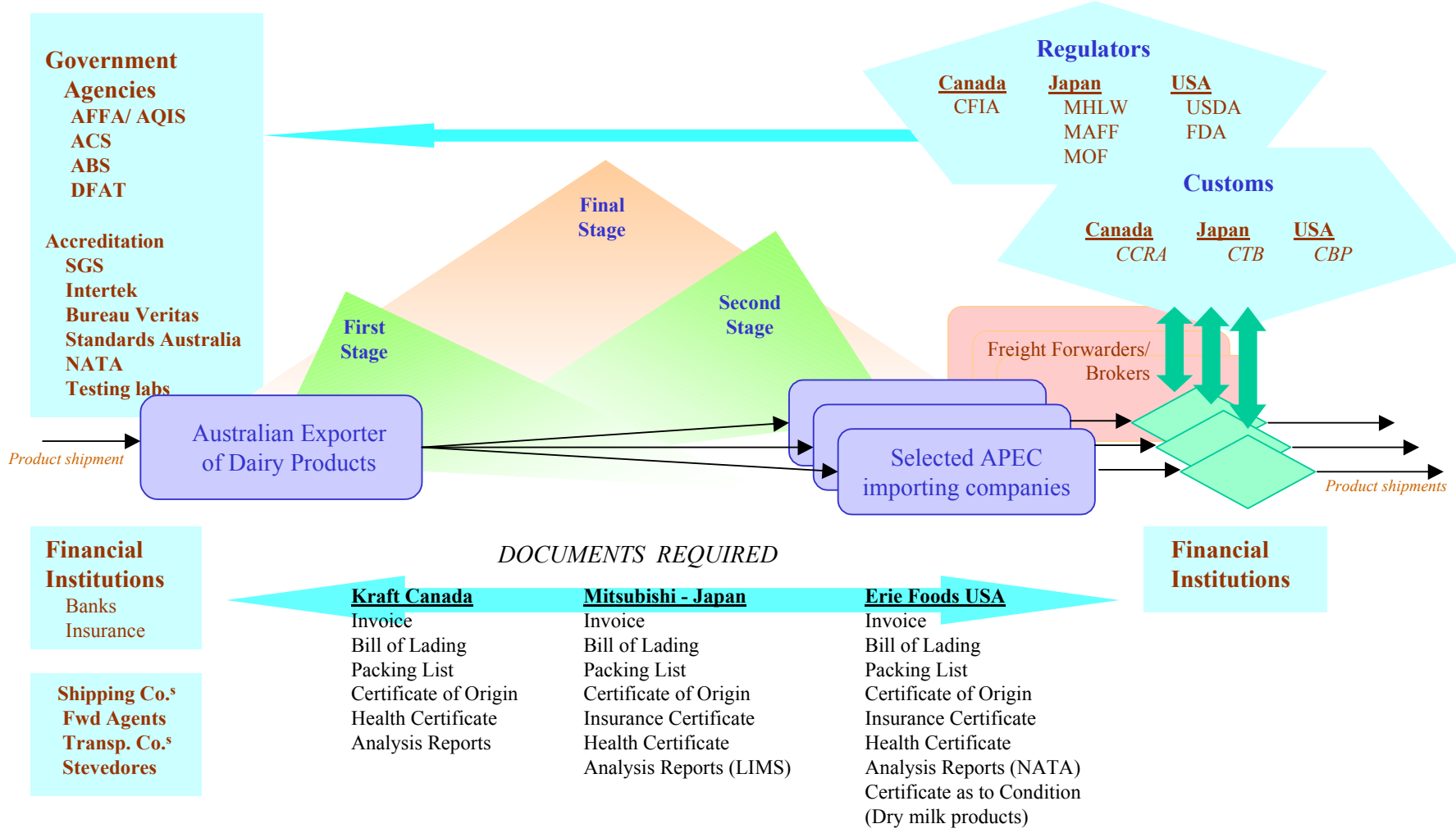
It is essential that the needs of the overall supply chain be addressed when seeking to implement “paperless trading” otherwise additional impediments will arise. Therefore the analysis process must include the requirements of all core groups; freight forwarding companies and their clients – the importers and their banks - plus their interfaces with government agencies in their economies. It is noted that many of these groups are actively developing methods of transferring documents using electronic means to suit their perceived individual requirements.

To achieve “paperless trading” it is necessary to achieve a free flow of structured data between the internal computer systems of the trading organisations and their associates. This change must also be expected to alter some present institutional barriers such as need for signatures or embossing of paper documents.

The basic supply chain, shown in the diagram on the page, shows the key information flow requirements to assist determining the potential impact of any technological change. The primary focus of each project stage is also indicated.

This report consolidates these findings. The ‘Suggested Solutions’ to achieve practical “paperless trading”, based on these findings, proposes three fundamental approaches;

- ❑ Convert existing documents into an electronic form or
- ❑ Provide information in an electronic form to better suit the specific requirements of trading economies or
- ❑ Seek alternative information routes or practices.



The illustration shows the basic flow of the product shipments and the documents needed to manage the transfer from the supplier to the final recipient's warehouse, together with the core organisations involved. While certain base documents are the same for the three economies selected for this project, some variations occur in the number and type of documents required.

The second stage of the project investigated the use of the 'set' of documents using the "E-cert" as an example. The "E-cert", composed in accordance with the importing economies "Regulators", was traced through the supply chain until it apparently ended with the "Customs" body of that economy. However further investigation demonstrated that "Customs", although critical to the overall process, were not necessarily the only or final recipient of that document as organisations such as financial institutions also demanded to see the document. It was also found that the relationship between "Regulators" and "Customs" or "Border Protection" authorities in an economy is complex and appears to differ in the selected economies.

As a broad and theoretical generalisation, "Customs" or "Border Protection" authorities accept or reject goods proposed for importation by applying the "Regulator's" requirements. Hence the exporting organisation compiles information, prepares and presents this information in a manner prescribed by the "Regulator" of the importing economy. The "Custom's" approval for clearance of a shipment depends on the correctness of the associated documents when compared with those regulations.

However the number and roles of "Regulators" vary between economies. Similarly the activities and responsibilities of "Customs" authorities varies. Both the currency and the application of the regulations affect these operations. These variations in process impact on what documents are needed, for what reason they are used and to whom they are presented in each receiving economy. Thus the role of the "Customs" or "Border Protection" and other various authorities responsible for accepting goods into an economy are defined by that economy and no general process was found in the three economies selected. It was also noted that the "rules" are dependent on the type and nature of the goods being imported. The "rules" may sometimes alter over time such as due to changes in legislation, need to immediately address major crisis in the economy or external threats.

These features are examined in further detail in later sections of this report.

Barriers to “Paperless Trading”

The first stage of this project explored the main institutional and non - institutional barriers under the core parameters of constraints, limitations and impediments to “paperless trading”. These limits were explored in some detail and addressed in sections, with attachments, entitled Technical, Legal, Financial, Government and Non-government issues. These findings have been summarised in the following paragraphs:

The fundamental definition of “paperless trading” implicit in this report is the free flow of structured data between trading organisation’s internal computer systems. Thus simple electronic transfer of information that results in a paper document having to be printed at the receiving point for ongoing computer processing of the information does not constitute “paperless trading” under this definition.

Technical considerations show facsimile messages conveyed by electronic means are not a form of “paperless trading”. A basic form of paperless communication could be an e-mail message with suitable attachments. Documents presented in Microsoft WORD, Adobe Acrobat ‘.pdf’ form and HTML may be acceptable under this criteria provided these documents do not have to be printed to enable the ongoing computer based processing of the information they contain. Web based services provided over the Internet can also meet this definition. Direct computer Electronic Data Interchange protocols such as ANSI and UNEDIFACT as well as more recent standards such as XML and XHTML meet this definition. Certain proprietary software packages also enable information to be electronically transferred however these were considered more commercially restrictive and hence far less attractive than the ‘open’ protocols.

In summary, the objective was described as conveying information by electronic transmission of core information documents through an established supply chain that was available to all relevant organisations. Passing only selected electronic data between specific computers limiting the number and type of participants was considered restrictive and could bypass critical groups in the supply chain thus impeding progress toward the fundamental “paperless trading” objective. The practical aspects of introducing change into complex business processes must also consider the need to cover the wide range of technical capacities that occur between different economies. Core documents may be electronically transferred in a human readable form rather than data formatted for direct computer database lodgement, although the latter is obviously the preferred long term solution and is being addressed by world standardising organisations to facilitate this solution.

Legal considerations include identifying core issues arising from the fact that documents used in present trade transactions are traditionally paper based and therefore are written and signed by a person who is to be held responsible for that transaction. These regulatory requirements produce legal barriers to electronic transactions as electronic messages, electronically signed or not, may not be enforceable in law. Consequently electronic transactions have been the subject of much debate and

legislative activity throughout all economies. It was noted that the United Nations Commission on International Trade Law, UNCITRAL, has developed model laws for international electronic transactions. These laws were completed in 1996 and finalised in 2001 with the law recognising Electronic Signatures. These model laws have served as the basis for legislation enacted in several economies.

In summary, the key issues identified the authority to be held responsible for the electronic transaction, the security and confidentiality of electronic communication and the timeliness of the information, particularly when title to the goods passes from one entity to another. Non-repudiation is a further consideration in establishing trusted electronic communications.

Financial information, particularly the payment for goods shipped and received, has been considered separately to the basic supply chain although it is intrinsic in the total trading operation. The project has described the preparation, conveyancing and use of paper documents that are passed in parallel with shipment of goods from packing to distribution. These documents, including the Health Certificate, are often conveyed between banks when passing between exporter and importer. The option of providing the documents in electronic form to banks, such as Bolero, has been addressed and is not favoured as these are proprietary systems and therefore considered restrictive.

Potential impediments included Banks, as they have a conservative tradition due to the nature of their business. However, the role of trading banks is to support financial aspects of cross-border trading. Transactions are optimally achieved through direct payments between trading partners or through Letters of Credit. Other issues arise when transferring title to the goods as they pass along the supply chain, for example from shipping company to broker.

While direct payments are already conducted using electronic communication processes, Letters of Credit usually remain in paper form. It was noted that banks are extremely reticent to admit how often Letters of Credit fail and the reluctance of traders to use this form of payment, as banks derive significant revenue from these transactions. As outlined in the first stage Murray Goulburn have developed and use a practical alternative Internet procedure for processing Letters of Credit as described in Attachment 2. Therefore given that there is a proven method available for adoption this is not considered a significant issue for preventing "paperless trading".

In summary, electronic communication is well established between major trading banks using their dedicated SWIFT network, which was examined in some detail in the first stage. It is considered the main financial aspects of cross-border trading may be achieved using existing practices available to trading partners in the APEC economies, as long as the information flow is maintained through the supply chain.

Government issues include political pressures in the form of Tariffs and Non-Tariff barriers including quotas in cross-border trading.

There is an increasing need to ensure conformance through the application of standards, technical regulations and procedures in cross-border trade.

In summary, the roles of the World Trade Organisation, WTO, World Customs Organisation, WCO and the Codex Alimentarius Commission, CODEX, were recognised in the first stages of the project. These organisations aim to facilitate product and data harmonisation, packaging and labelling. These features are noted as playing an increasing part in cross-border trade from shipping container to individual product wraps. Packaging and labelling may be dictated from many sources, including customers, freight handling organisations and government regulations. Materials, language and description are also often specified. All these issues must be accommodated in “paperless trading” procedures.

Non-government issues include the capabilities of developing economies to adopt established and emerging technologies that permit paperless trading/ electronic communication. The Internet, widely used in Australia, is recognised to be less pervasive in other economies. In those less developed economies, governments have an important role in supporting companies to be competitive by promoting the development of technologies that enable electronic commerce.

The focus of the first stage of the project was on those documents perceived to be critical to cross-border trading; - the Letter of Credit, Bill of Lading and the Health Certificate. The Certificate of Analysis and Certificate of Inspection were added during work on the second stage. The Letter of Credit issued by the bank in the importing economy often lists the document requirements of the importer and bank including the Health Certificate, Certificate of Analysis and Certificate of Inspection.

In summary, there are many institutional barriers and these vary between different economies. The main factors impeding adoption of “paperless trading” are being actively addressed by many leading world bodies and include:

- Lack of standardised operational Information Technology infrastructure for communication ranging from document transmission techniques, information presentation and data definitions. This factor was initially addressed with the introduction of EDI and subsequently with ‘proprietary’ systems. A more acceptable standard now appears to be the Internet and associated use of XML technology. It is suggested only such ‘open’ systems using the simplest technologies will succeed. TEDI and Bolero are now offering an XML version of their EDI systems. Other organisations such as the WCO are reported to be examining this issue in their "capacity building" discussions.
- Lack of agreed data definition and subsequent data alignment between communicating traders. The WCO Data Model addresses these issues to facilitate and progress these aspects of information communication.
- Lack of standardised legal and legislative frameworks, laws and legal practices. This factor is being addressed on a multitude of fronts including the WCO as

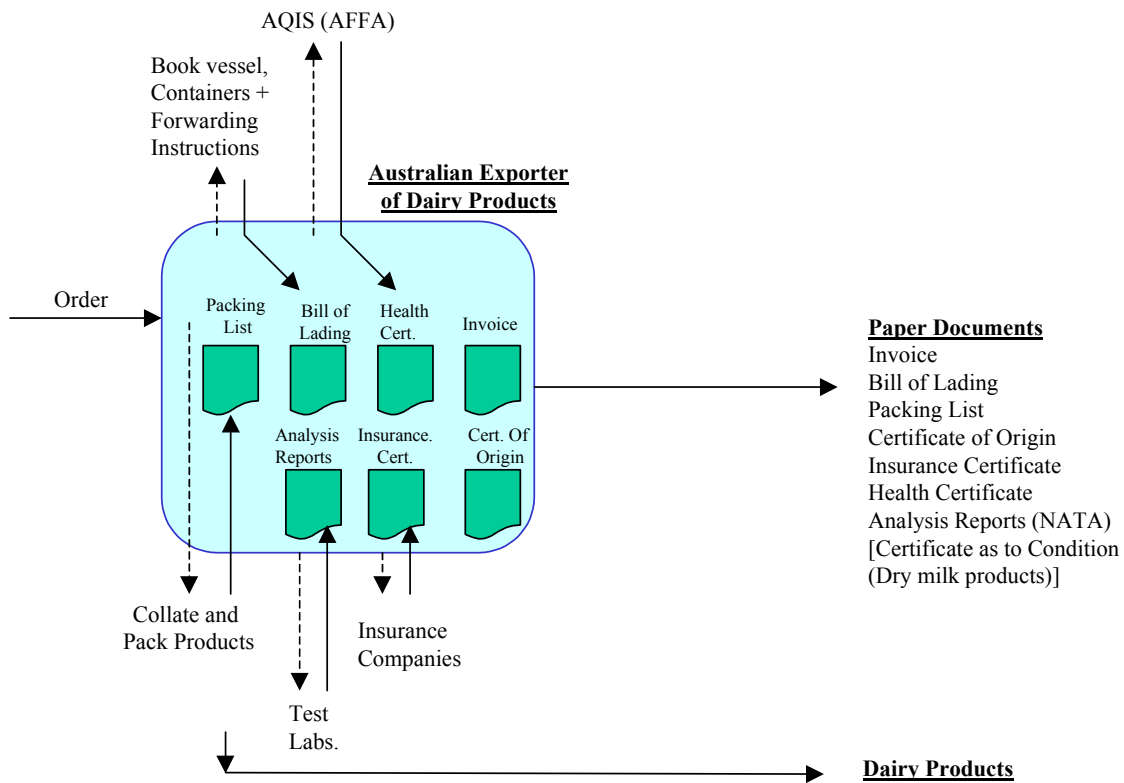
"mutual administrative assistance" meaning working bilaterally and eventually multilaterally towards aligned business practices in the participating economies. Similarly CODEX seeks to assist by providing standardisation practices that may be adopted to facilitate trading processes.

- Lack of focus upon supply chains with their financial underpinning as an integrated process. This aspect includes the need for appropriate trading controls and data standardisation as well as recognition of the commercial financial structures. Bolero offered a 'proprietary' system where the major banks offered to electronically convey documents between associated banks, as described in the first stage. This method has encountered challenges from independent commercial organisations and the legal framework, primarily on the grounds of precise determination of the conditions for transferring title to the goods between participants.
- The purpose and use of the information contained in any one document may vary between economies. Some economies, for various reasons, required more extensive validation. Organisations, other than the one for whom the document was originally intended, may want to view and endorse the document. For example monitoring imports for statistics and other reasons. This significantly impacts the preparation, transmission and final presentation of the information. In the case of Health Certificates for food, AQIS is reported to have nearly 200 active individual certificate templates, with a total recorded number of over 450 templates to be able to accommodate these needs. This changes the document from a simple health assurance between trading partners to potentially a subtle trade barrier.

Processes

Exporting

Documents used for export of dairy products from Australia were examined in detail in the first project stage. The core of the specific document sets used to export dairy products to each of the three selected economies is illustrated below as a simplified summary of the situation:



It should be noted that many other documents are produced during this process, both for corresponding with external organisations – government and commercial - plus those papers needed internally to initiate various processes and procedures.

Each of the selected economies has their own individual methods of accepting products being imported into their economies. All of the economies have a border control in the form of a “Customs” group. These groups ‘Control’ the imports by enforcing the instructions of the economy’s ‘Regulators’. These individual procedures are shown on the following pages.

Importing – Canada

As with all the economies, the importing procedures are complex and have emerged over time to address various issues as they have arisen. The procedures appear very product oriented and often export economy oriented. This basic feature was acknowledged in the first APEC stage.

Examining this aspect within Canada it is found that particular dairy products may follow different importing procedures. The Canadian Customs and Revenue Authority, CCRA, are notified of the shipment of identified dairy products by the importing company or their representative who is usually a freight forwarder or broker.

Depending on how the dairy product is classified in terms of “risk”, it may be referred to the Canadian Food Inspection Authority, CFIA, or immediately passed for clearance and the CFIA later informed of the shipment.

The CFIA is currently working on implementation of an EDI process for handling of food imports. The plan is that the broker provides the total package of electronic information to Canadian Customs where the computer process extracts the information for Customs requirements. The relevant information is then communicated to the CFIA. The CFIA import computer system evaluates the received information for completeness and in return corresponds to Customs computer stating acceptance or refusal. The information received by the CFIA import computer system is not complete for all CFIA needs, for all commodities. Additional information and official documents such as certificates are initially entered manually by CFIA import officials who clear import documentation. It is intended that where certificates are required they will be received electronically and transferred automatically into the CFIA import computer system, thus reducing re-keying of information even further.

At present CFIA receives official meat inspection certificates from AQIS on paper. The information is manually keyed into the CFIA computer system. The system automatically checks the entered data for validity. These checks include shipping marks, labelling registration numbers, foreign slaughtering, processing and exporting plants, container seals etc. The broker, at the time of request for clearance of a shipment being imported, provides additional information required for CFIA control purposes. The broker also provides essential shipment ‘tracking’ information including where the shipment originated, transferral points and destination.

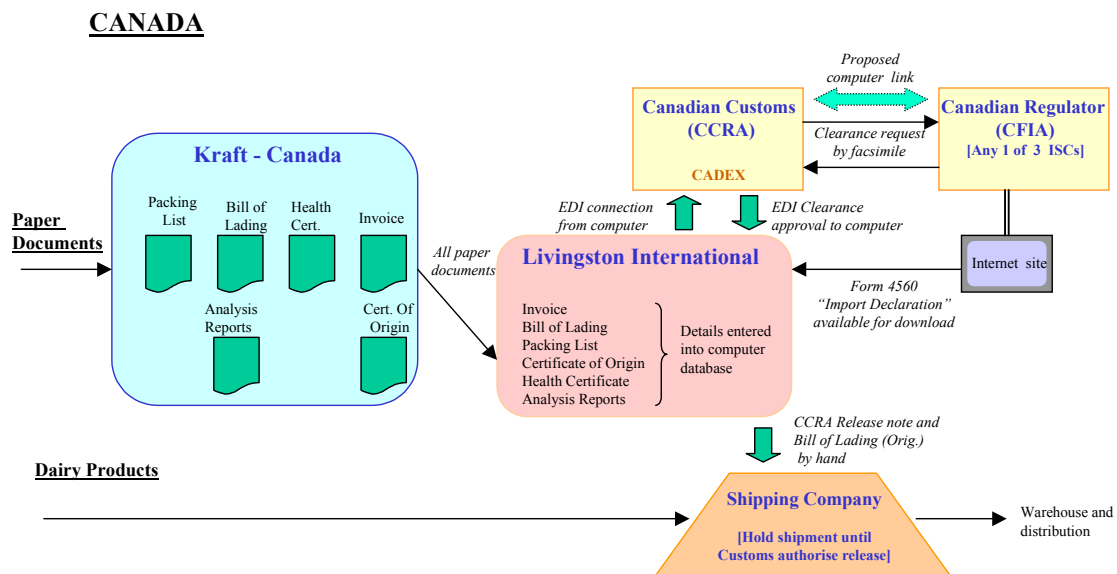
When the shipment requires a CFIA release, the importer or representative faxes the required documents including the Import Declaration and Certificate of Origin to one of the three CFIA Import Service Centres, ISCs, where officials review the documents. If the documents are in order, comply with regulations and the product is eligible, the ISC stamps the Request for Release, RFR, form and faxes it back to the importer or representative. The CFIA endorsed RFR and related documents are then presented to the custom office involved. The CFIA stamped RFR indicates to Customs that the CFIA consider the shipment acceptable.

Low risk products may be pre-released and allowed entry into Canada by Customs following the importer or representative producing the required information. In this case the importer or representative may transmit information contained in the documents received from the exporting company electronically to the Canada Custom's system, CADEX. Customs will collect the required information pass this to the CFIA. In other cases, depending on the merchandise, the actual paper documents must be presented to the Canadian Customs to obtain the necessary release.

For the higher risk shipments that have to be released by CFIA, some of the information would already have been automatically received by the CFIA system to make the final clearance decision quicker. The CFIA would still require the appropriate official certificates before finalising the data entry and shipment clearance.

It is advised by the CFIA that Customs are aiming at making the EDI interface mandatory within the next 2-3 years. Currently the CFIA is completing the development of a computer program to accept the New Zealand meat E-cert.

The overall importing process is illustrated below as a simplified summary:



The CFIA does not require official public health certificates for import of dairy products. Hence Canadian Customs allow entry of dairy products only when the CFIA informs them that the shipments were cleared by the CFIA. The CFIA, clear the shipments based on requirements, which currently for dairy products is an Import Declaration document, submitted by the importer as shown on the page following.

APEC - Paperless Trading Demonstration Project



IMPORT DECLARATION

DÉCLARATION D'IMPORTATION

<input type="checkbox"/> Dairy Products / Produits laitiers <input type="checkbox"/> Seeds / Semences		<input type="checkbox"/> Processed Fruits and Vegetables / Fruits et légumes transformés <input type="checkbox"/> Feed / Aliments du bétail		<input type="checkbox"/> Honey / Miel <input type="checkbox"/> Fertilizer * / Engrais *		<input type="checkbox"/> Maple Products / Produits de l'érable	
* Registrable / Assujéti à l'enregistrement							
2. Name and Address of Manufacturer / Nom et adresse du fabricant				3. Name and Address of Exporter / Nom et adresse de l'exportateur			
4. Name and Canadian Address of Importer / Nom et adresse canadienne de l'importateur				5. Name and Address of Destination (consignee) / Nom et adresse du destinataire			
Telephone Number / Numéro de téléphone				Telephone Number / Numéro de téléphone			
5. Transaction No. / N° de transaction		6. Transaction No. / N° de transaction		7. Carrier / Transporteur		7. Carrier / Transporteur	
				9. Container No. / N° de conteneur			
8. Flight No. / N° de vol				10. Trailer No. / N° de remorque			
PRODUCT DESCRIPTION AND PACKAGING (ATTACH LIST IF NECESSARY) DESCRIPTION DU PRODUIT ET DE L'EMBALLAGE (ANNEXER UNE LISTE AU BESOIN)							
11. Common Name / Nom usuel		12. Brand Name / Marque		13. Grade / Catégorie		14. No. of Shipping Containers / Nbre de contenants d'expédition	
15. No. Type and Net Contents of Individual Containers per Shipping Container / Nbre, type et contenu net des contenants individuels par conteneur d'expédition		16. Total Net Quantity / Quantité totale nette	17. Label Approval No. / N° d'approbation de l'étiquette	18. Registration No. / N° d'enregistrement	19. Purpose of Importation / Motif de l'importation	20. Additional documentation and other references / Autres documents et références	
21. Declaration / Déclaration							
I, _____ the importer of the products described on this form do hereby certify that the information provided on this form is complete, correct and accurately describes the products contained in the shipment. By signing this declaration in the case of the food products used for human consumption, I affirm that I have read the "Regulatory Requirements for Food Products Imported into Canada" set forth in the instructions to fill out this form and that the products described on this form meet those requirements.				Je _____, l'importateur des produits décrits sur ce formulaire, certifie que l'information qui y figure est complète et qu'elle décrit avec précision les produits contenus dans ce chargement. En signant cette déclaration, dans le cas de produits alimentaires utilisés pour consommation humaine, j'affirme que j'ai lu les « Exigences réglementaires pour les produits alimentaires importés au Canada » inscrites dans les instructions pour remplir ce formulaire, et que les produits qui y sont décrits satisfont à ces exigences.			
Signature				Date			
GOVERNMENT USE ONLY / RÉSERVÉ À L'ADMINISTRATION							
22. Stamp / Estampille				23. Instructions to Customs and Importers / Directives aux douaniers et importateurs			
				<input type="checkbox"/> Release to the control of CFIA (i.e. inspection at destination) at the time of importation / Au moment de l'importation, main levée et remise sous le contrôle de l'ACIA (pour l'inspection à l'arrivée à destination) Further action to be conducted on the shipment at the following place: / Autres mesures à prendre à l'égard du chargement à l'endroit suivant : _____ _____ Other instruction / Directives particulières _____ _____			

The information is collected by the Canadian Food Inspection Agency for the purpose of administering all Agriculture Acts. Information may be accessible or protected as required under the provisions of the Access to Information Act.

L'information est recueillie par l'Agence canadienne d'inspection des aliments aux fins d'application de la législation agricole. L'information peut être accessible ou protégée en vertu des exigences de la Loi sur l'accès à l'information.

Importing – Japan

As shown and described in the second intermediate stage, the documents required for Japan to import dairy products are separated when clearing shipments into the economy. The separate ‘sets’ are then presented to the Ministry of Finance Customs group and the Customs House at the port of entry.

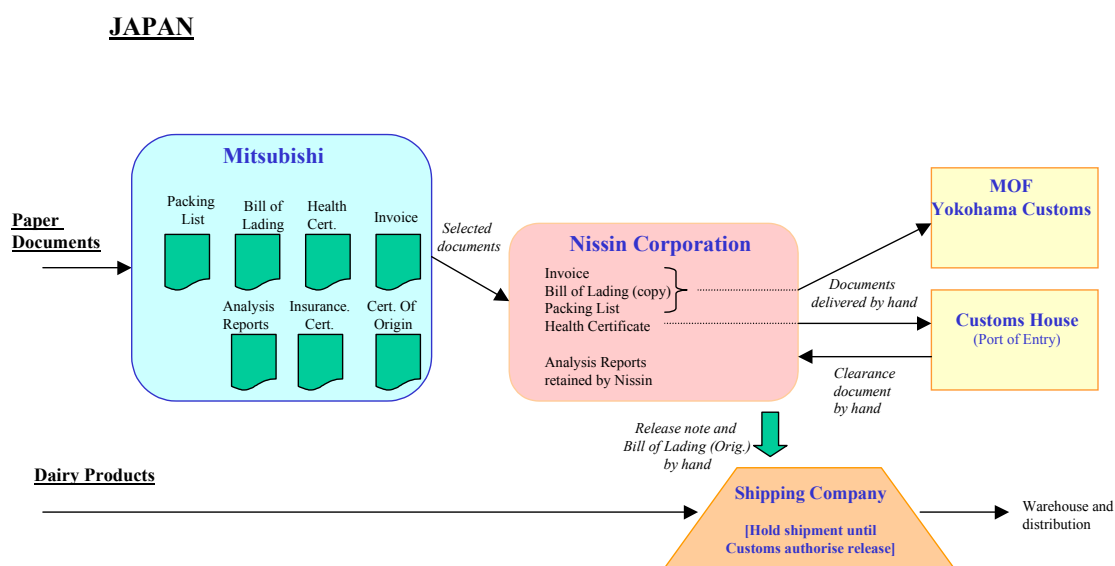
In general it is not necessary to submit a Health Certificate to government agencies for dairy products, however it is required for natural cheese. In this case, the Customs and Tariff Bureau, CTB, examine the certificates produced by the Australian Government to determine the tariff rate. It is advised by the importer that the AQIS "Health Certificate" is not a mandatory requirement by the government for cheese imports. The ‘certificate’ is referred to as a voluntary document provided by importers to assist with tariff classification and certifying the product is Natural not Processed cheese.

It was also observed that Branch customs officers do not have ready access to the Internet for security reasons. However, Customs has recently introduced an electronic lodgement system where importers can electronically lodge information from their supporting documents.

The Japanese Freight Forwarding companies such as Nissin, submit an Import Food Application on behalf of the importer. The contents of this form contain; vessel’s name, date of arrival, item name, weight, name of storage warehouse, manufacturer and factory of item, ingredients, additives and manufacturing flow.

Nissin access the Nippon Automated Cargo Clearance System, NACCS, which is connected to the CTB computer system and enter vessel’s name, date of arrival, item name, name of storage warehouse, weight, importer, tax amount. Nissin compile a Natural Cheese Certificate, which together with the AQIS supplied “Health Certificate”, is presented to the CTB.

The overall importing process is illustrated below as a simplified summary:



Importing – USA

The Food and Drug Administration, FDA compiles and issues the Code of Federal Regulations. AQIS prepare the Health Certificate in accordance with these codes. However several sources within the FDA categorically state that the FDA does not have a general health certificate requirement. Attempts to clarify this statement have not been successful to date and it is possible that the advice referred to the FDA not requiring export certificates.

The FDA representative advised that the primary factors in the Australian Health Certificate are the declaration for Foot and Mouth disease, Throat infections and Seals on containers.

United States Department of Agriculture, USDA, appears to have a broad coordinating role for imported food products. The department appears to rely on the sub-departments of APHIS and FSIS for control of agricultural, plant and food products.

The advice received to date from the USDA representatives is that the department has no certification requirements for dairy products being imported into the USA.

USDA – Animal, Plant and Health Inspection Service, APHIS also expressed no interest in dairy products imported from Australia.

USDA – Food Safety and Inspection Service, FSIS, representatives state that FSIS does not regulate or examine dairy products imported from Australia.

Customs and Border Protection field staff advise that the Cargo office at the port of entry is responsible for clearing and releasing imports subject to FDA approval. The Cargo office will not release a shipment subject to FDA review without their approval.

Customs and Border Protection documents state that all dairy products are subject to the USDA – APHIS and FDA requirements. The dairy products described are milk, cream, butter, cheese, cheese products and ice cream. These products are subject to quota restrictions administered by both Customs and the USDA.

Customs and Border Protection management advises that currently there are over ten federal agencies that maintain statutory authority over food importations and there are various automated systems that are currently used to manage those imports. The planned Automated Commercial Environment, ACE, under the broader Customs Modernization Organization, CMO, within the Department of Homeland Security, DHS, has the objective of consolidating and streamlining the processes.

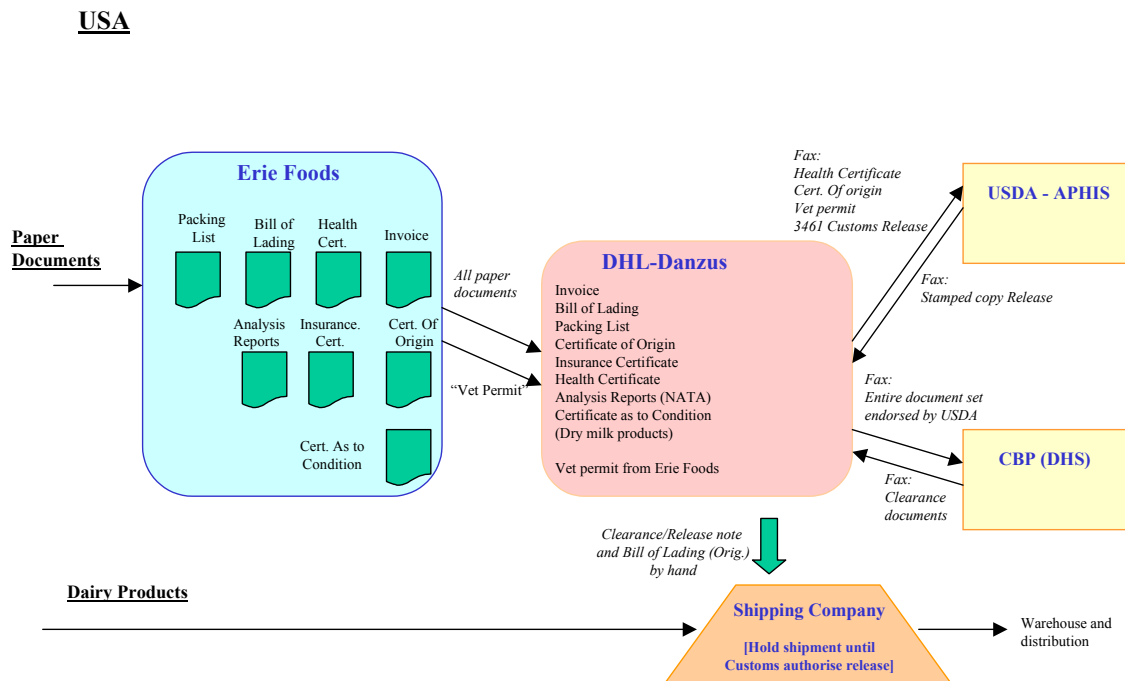
The ACE Director advises that they consider the single most important benefit, from a trade perspective, is in delivering a single window for the future filing of trade data. They consider that there are many redundant data elements and filing requirements that, as part of ACE and International Trade Data Systems, ITDS, should be consolidated into a standardised data set. In that environment, an importer or broker will only have to file the required data once and the federal agencies that regulate food imports will share this data to collaborate in the identification of high-risk entities as well as determine shipment release. Thus the development of ACE is focussed on using

electronic communications between the trading partners and agencies that have border control responsibility

DHL Danzus, the Freight Forwarding company used by Erie foods who import Australian dairy products, advise they conduct the following procedures when clearing shipments of dairy products from Australia:

- a) The following documents are received from Murray Goulburn via DHL:
 - Bill of Lading
 - Invoice
 - Packing List
 - Certificate of Origin
 - Health Certificate
 - Australia Insurance Certificate
 - Certificate as to condition of dry milk products
- b) The Health Certificate, Certificate of Origin and Vet permit (from Erie Foods) are sent by fax to the USDA with a copy of 3461 (customs release form).
- c) The USDA (APHIS PPQ) reviews the documents and, when approved, returns a mandatory stamped copy via fax.
- d) DHL Danzus then submits the entire document set to the US customs agent in Moline, IL for his release.

The overall importing process is illustrated below as a simplified summary:



Importing – Documents

The following sets of documents were noted as applicable to the selected economies. Additional documents may be required in particular cases.

Kraft Canada	Mitsubishi - Japan	Erie Foods USA
Commercial Invoice	Commercial Invoice	Commercial Invoice
Bill of Lading	Bill of Lading	Bill of Lading
Packing List	Packing List	Packing List
Certificate of Origin	Certificate of Origin	Certificate of Origin
Health Certificate	Insurance Certificate	Insurance Certificate
Analysis Reports	Health Certificate	Health Certificate
	Analysis Reports (LIMS)	Analysis Reports (NATA)
		Certificate as to Condition (Dry milk products)

These documents may comprise text only or text plus graphics such as organisation logos, signatures or images. The documents may be prepared by Murray Goulburn or outside agencies such as AQIS. All these factors affect how the information contained in these documents may be translated into electronically compatible formats for transmission along the supply chain.

The table on the following pages describes these features.

Core documents identified by this project:

<i>Document</i>	<i>Prepared by</i>	<i>Format specified by:</i>	<i>Special features</i>	<i>Required by:</i>
Commercial Invoice	Murray Goulburn	Importing company/bank	Format + graphics	CFIA/CCRA, CTB, DHS
Bill of Lading	Shipping Company	Shipping Company	Individual shipping stationery	CTB, DHS
Packing List	Murray Goulburn	Importing company/bank	Format	CTB, DHS
Certificate of Origin	Murray Goulburn	Importing economy Regulator	Format + graphics	USDA-APHIS +DHS
Insurance Certificate	Insurance Company (Murray Goulburn)	Insurance company	Format + graphics	DHS
Health Certificate	AQIS	CFIA, MHLW, MAFF, FDA	Special stationery	CTB, USDA-APHIS + DHS
Analysis Reports (NATA) USA	NATA (Test Laboratory)	FDA	Format + graphics	DHS
Certificate as to Condition (Dry milk products)	Murray Goulburn	FDA	Format + graphics	DHS
Container seals (USA)	Murray Goulburn	FDA	Format	DHS

<i>Information</i>	<i>Supplied by</i>	<i>Format specified by:</i>	<i>Special features</i>	<i>Required by:</i>
Transit information to be contained in above documents (USA)	Murray Goulburn	USDA-APHIS	Format + graphics	DHS
Import Declaration	Freight Forwarder/Broker	CFIA	Format	CFIA/CCRA
Request for Release (Canada)	Freight Forwarder/Broker	CFIA	Format + graphics	CFIA/CCRA
Vet Permit (USA)	Freight Forwarder/Broker	USDA-APHIS	Format + graphics	USDA-APHIS + DHS
Customs Release Form (3461) DHL - USA	Freight Forwarder/Broker	USDA-APHIS	Special stationery + graphics	USDA-APHIS + DHS

Legend: CTB = Customs and Tariff Bureau (Japan)
 CCRA = Canadian Customs and Revenue Agency (Canada)
 CFIA = Canadian Food Inspection Authority (Canada)
 DHS = Department of Homeland Security now including,
 CBP = Customs and Border Protection (USA)

Core Documents

The core documents for dairy products being imported into to Canada, Japan and the USA are shown in the tables on the following pages. This list identifies the documents used for the export of dairy products produced in Australia for APEC markets from the 1 October 2002.

These documents have been categorised into three groups:

The first group contains those documents that are already sent electronically from the originator to the recipient in the supply chain. Thus they may be subject to further electronic transmission if required. As these documents may readily be sent electronically, no further consideration of conversion to electronic format is necessary at this stage. Thus these documents are assessed as being able to be readily included in the 'set' of documents that are to be sent electronically.

The second group contains those documents that are controlled by their originator for various reasons. The prime reason is that the regulations in the importing economies seek an independent authority to minimise the risk posed by those food products. Thus validation of the quality by government agencies or independent testing organisations is important to this form of risk management.

The possible conversion of these documents has proven to be the main task of this project. Hence the selection of the electronic Health Certificate or "E-cert" to demonstrate a practical solution has proven to be a good choice as it highlights the main impediments to implementing "paperless trading".

The third group contains those documents that are controlled by the originator but are only used within Australia. Hence they are considered to be of secondary importance to the project task.

Core Documents

CLASS 1 DOCUMENTS – Those documents that may be readily and immediately transferred electronically.

<i>Document</i>	<i>Communicated</i>		<i>Constraints</i>	<i>Signed</i>
	<i>By</i>	<i>From/to</i>		
Certificate Of Analysis a) LIMS b) See below c) Standard	C/F	Bank/ Customer	a) MG issued from MG computer print. b) c) MG issued from MG computer print.	MG MG
Certificate Of Origin a) MG b) VECCI	C/F	Bank/ Customer	a) MG computer data printed in preformatted style b) VECCI Template completed at MG. MG sign and E-mailed	MG
Certificate, Insurance	C/F	Bank/ Customer	AusDocs, Silicon Craft format. Stamped and signed at MG	MG
Commercial Invoice	C/F	Bank/ Customer	MG issued from MG computer print.	MG
Forwarding Instructions	F	Shipping Co.	MG issued from MG computer print.	No
Insurance Declaration	C/F	Bank/ Customer	MG issued from MG computer print, using MS WORD template	MG
Packing List (Weight List)	C/F	Bank/ Customer	MG issued from MG computer print.	MG

CLASS 2 DOCUMENTS - Those documents that are controlled by the originator.

Bill of Lading	C	Shipping Co.	Hardcopy supplied from shipping company or protected image (".pdf") files printed from Internet	MG
Certificate Of Analysis a) See above b) NATA from DTS c) See above	C	Bank/ Customer	a) b) DTS issued c)	DTS
Certificate, Veterinary, Health [Sanitary] (Certificate as to Condition)	EXDOC	AQIS	Remote print from AQIS OR Couriered from AQIS print in Canberra following a Request for Permit application.	AQIS
Certificate, Inspection [Clean report of findings] CASCO Intertek SGS Bureau Veritas	C	Bank/ Customer	MG signed and mail/courier	MG

CLASS 3 DOCUMENTS - Those documents that are controlled by the originator for Australian use only

Export Clearance Declaration	C	ACS	ECN provided via EXDOC and AQIS.	MG
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Legend: C = Courier, E = EDI, F = Facsimile, eM = E-mail, Bank/ Customer = Bank or Customer, EXDOC = AQIS exporter access program.

Considerations

The following features are offered as guidelines for the progressive development of techniques to achieve “paperless trading”. They are based on the experiences gained in developing and implementing electronic communication methods and from the “E-cert” demonstrations conducted during this project:

- **It is considered essential that any electronic communications considered for use should be based on an ‘open’ as distinct from ‘proprietary’ system.** This means that the system components and operation are freely available in the marketplace. The Internet typifies an ‘open’ system that has attracted a rapid uptake worldwide.
- **The Internet offers an excellent communication platform for both government and business operations.** It is robust but vulnerable to “hackers”; those people who seek to interfere with the processes for a multitude of reasons. Securing the information/data by encryption is one method of overcoming this weakness however there are other means of achieving this aim depending on the information and the processes involved. Access to the Internet is generally available throughout the APEC economies. The Internet is relatively cheap and easy to use and hence offers low cost electronic communications.
- EDI has proved to be a strong technology but the detailed definitions of specific message types has made this method complex and therefore it is expensive to implement and maintain. XML has emerged as a more flexible technology that produces similar facilities to EDI, hence providing an alternate means of data communication. **Due to XML’s affinity to the Internet HTML, it may be readily linked to Internet web pages. This produces a very powerful and relatively inexpensive means of communication for text, graphics and images.** This underlines the advantages of the Internet for APEC economies.
- **There is a need to track each document for each industry and determine who uses what information and for what purpose.** Paper based communications are produced to convey information supporting trading relationships. As the need for information increases, documents are compiled to meet those needs. In the present complex ‘supply chain’ of organisations, information is usually wanted by more than one group. It was noted from the investigations centred on the Australian Health Certificate that:

Canada, the CFIA claimed controlling responsibility but did not require a Health Certificate for importing Australian dairy products. Banks generally used the Health Certificate at the request of the importing company to assure their clients of product quality.

Japan, the MOF used the Health Certificate to determine applicable tariffs for dairy products but the importer advised that otherwise they did not need the certificate, it is referred to as a voluntary document. However it is required for natural cheese and other products.

The USA uses the dairy Health Certificate for the declaration for Foot and Mouth disease, Throat infections and Seals on containers. The USDA has a broad coordinating role for imported food products relying on the sub-departments of APHIS and FSIS for control of agricultural, plant and food products. The CBP documents state that all dairy products are subject to the USDA – APHIS and FDA requirements including quota restrictions administered by both CBP and the USDA.

- **The information needs to be accessible to the many organisations throughout the supply chain, both government and business to provide maximum flexibility to meet particular requirements and needs of individual economies.** Documents limited to a specific strata, such as bank or government communications, are also limited in their use and tend to be viewed similarly to ‘proprietary’ systems. However, it may be advantageous to explore the possibility of developing a new document or ‘sets’ of documents directed at conveying specific essential information to defined recipients to meet operational requirements. This aspect is considered in some of the suggested solutions.
- **Many economies are seeking to facilitate trading relationships by providing ‘single windows’ where the importer, or exporter, may access all government requirements through one point using a structured format that will then deliver defined data to the correct recipient.** This method relies on accurate data entry and hence must make provision for subsequent additions, corrections and amendments. It offers advantages for the receiver but not necessarily to the data sender. Conversely where the sender presents structured data on, say, an Internet screen, it can offer more advantage to the sender than the receiver. Where structured data may be downloaded from the Internet screen, the disadvantage is reduced for the receiver. However the data must be structured so it may be used directly in the receiver’s computer systems. This requires greater effort by the sender when multiple receiver requirements exist. When this downloaded information has to be interpreted and correlated by the receiver with information from other sources, the attractiveness of this procedure is again reduced. These multifaceted aspects are also considered when suggesting the solutions.

Suggested Solutions

Introduction

From the present findings of this project, it is recommended that to achieve “paperless trading” it is necessary to communicate the total ‘set’ of documents to all members of the ‘supply’ chain who normally receive information from those paper based documents. Should any one document be deleted from the ‘set’, then alternative arrangements have to be put in place to provide any information that may now be omitted from that specific information stream.

The links in the ‘supply’ chain vary according to the document and the economy importing the goods. Further, the links may vary in an economy depending on the type of goods within the group, for example within the dairy foods group, dry milk powder is treated differently from cheese products. There may also be differences within cheese products. The only common linkage is between the trading partners – the exporter and importer – for shipment and payment of goods.

This ‘supply’ chain linkage is simply illustrated on the following page. It may be noted that from the practical demonstration of the electronic Health Certificate, E-cert, in the three selected economies that the destination and use of the paper based Health Certificate differed markedly in each of those economies:

Canada copy faxed to the CFIA and information derived from the Certificate keyed into CADEX by the Broker. CFIA inform CCRA of clearance.

Japan original presented to central Customs and information derived from the Certificate keyed into NACCS by the Broker for Port of Entry clearance.

USA copy faxed to the USDA – APHIS and presented to CBP by the Broker.

In other economies contacted during the demonstration period, it was advised by one that the Health Certificate was not required and in another, that it was necessary for Customs clearance.

In view of the apparent disparate and multiple use of such documents, it is considered impractical for the Australian exporter to nominate one recipient in each economy for any one of the documents in the overall ‘set’.

As described in the preceding section, it is quite practical for many of these documents to be despatched electronically. The question therefore becomes how to maintain the complete ‘set’ of documents for electronic transmission.

Distinguished Documents

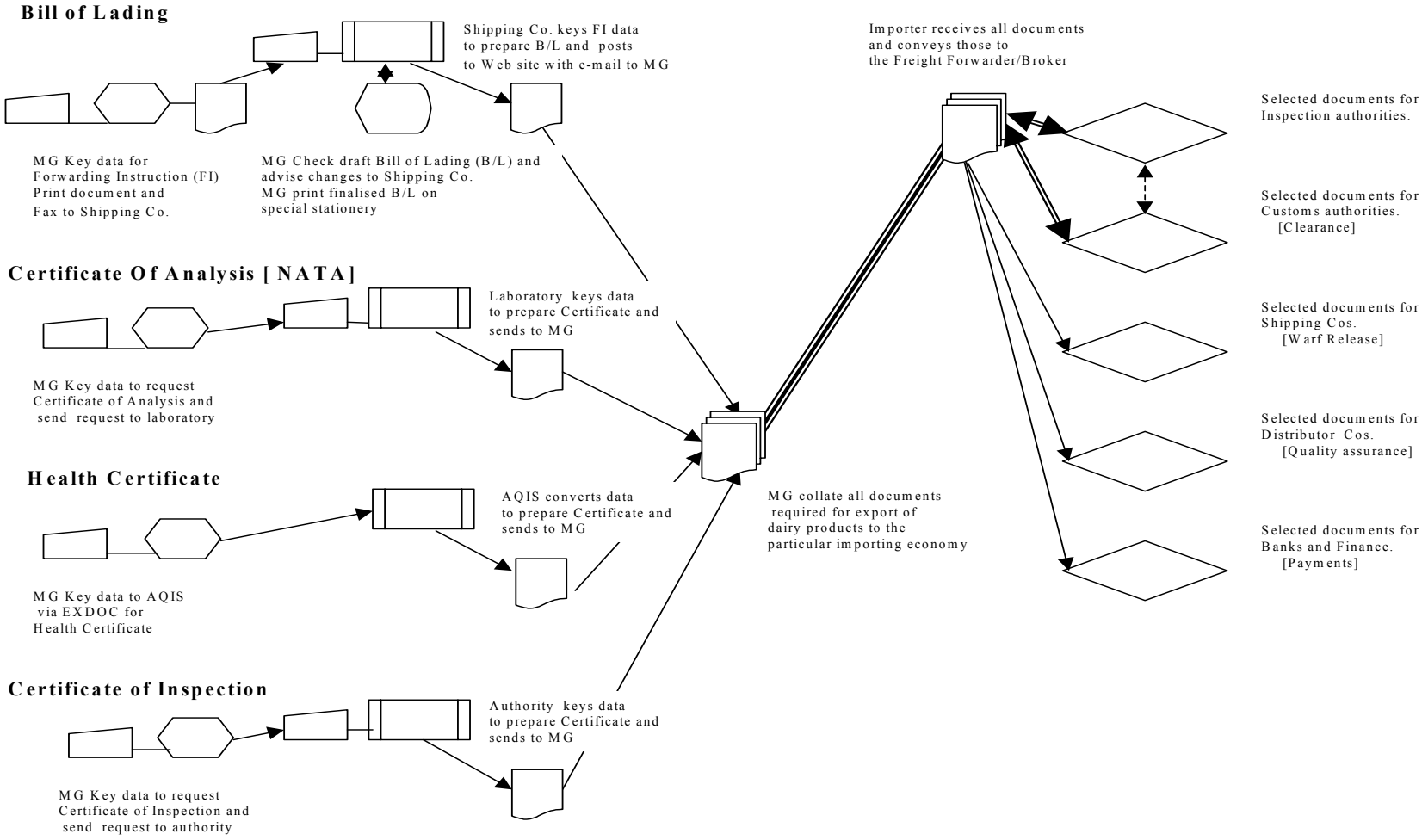
The barriers to cross-border trading have been outlined. The solutions are suggested to lie in satisfying, overcoming or bypassing such barriers. In the first project stage, a practical method of electronically conveying information of Letters of Credit over the Internet was outlined and shown in Attachment 2. This solution obviates the need for the physical carriage of that paper based document between the issuing bank, the exporter and importer plus the receiving banks. Similarly in that stage, a method of conveying finalised Bills of Lading using electronic means was outlined and shown in Attachment 3. Again the physical carriage of paper based documents was minimised. In these cases, barriers were both satisfied and bypassed.

While it may be desirable to electronically convey specified information to individual recipients, this does not appear to be practical due to the number of organisations and range of goods involved. Although it is considered conceptually incorrect to simply convert the present paper documents and procedures into an electronic format and use virtually the same paper based procedures, in general this appears to be the only short term practical solution.

Four documents have been identified as the main restrictions to full electronic transmission of the 'set' of documents. These documents have been listed above in alphabetic order. Listing these documents now in general order of perceived difficulty of transforming them into an electronic form considering the potential 'barriers', from the most difficult:

- 1. Bill of Lading***
- 2. Health Certificate***
- 3. Certificates Of Analysis***
- 4. Inspection Certificates***

The diagram on the page following indicates the flows of these basic documents from preparation through the 'supply chain' to their destination. This assists understanding of how complete information contained in the present 'set' of documents may be conveyed to the appropriate recipients using alternative electronic methods. Note, some documents flow to and from some particular organisations such as brokers and financial institutions during the overall course of the transaction.



Each of these documents is now examined to suggest possible practical solutions of conveying the information contained in those documents while still maintaining their integrity, accepting the potential barriers and seeking simplest implementation activities that will appeal to the widest range of economies.

It is emphasised that these ‘solutions’ are posed only as possible avenues to be explored and are not recommendations at this stage of development. It has been reiterated throughout this report that there are many government and non-government bodies involved in cross-border trading. Any proposed solution must be arranged with their full knowledge and co-operation. Further, many of those bodies are actively seeking means to facilitate such trading relationships. While many of these groups have been mentioned in the report, it is inevitable in an exercise such as this project that some may have been inadvertently overlooked or insufficient attention has been paid to their importance in cross-border trading. All these aspects were encountered during the period of the project where participants were being quickly sought to view and comment on the “E-cert” demonstration.

Bill of Lading

This document originates from a 'Forwarding' or 'Shipping' Instruction issued by the exporting company. The final Bill is currently printed on special shipping company stationery with Terms and Conditions recorded on the reverse of each page. The document may extend over several pages for large shipments.

Issue

This document is prepared and issued by a shipping company who maintain control over the document as they have the responsibility of safe carriage of the goods from delivery by the exporter until the goods are cleared at the final port of destination to the importer. The special stationery maintains document security during its physical progress through the supply chain. The original Bill is required to be presented to the banks and usually sighted by Customs before a shipment will be released to the importing company.

The main issue is considered to arise from the need to maintain the integrity and security of this commercially negotiable document. The information contained in that document is generally available to the supply chain organisations to process shipments.

Potential solution

Print the original Bill and copies at the port of destination by the shipping company while permitting copies to be printed by the exporting company. In this case the 'original' Bill would have an extra field for endorsement by the exporting company. The information contained in the Bill is generally also contained in other documents related to the particular shipment and hence will probably satisfy the intermediate supply chain links. The inclusion of the Bill within the document 'set' appears to be a matter of expediency in physically transporting the document. Thus the proposed solution overcomes that need and enhances the document security.

A major issue is the legal aspects of the Bill which gives title to the goods to its possessor with commensurate responsibility and accountability for those goods. Thus any mishap or fraudulent activity associated with the goods reflects on the current owner of the Bill. As the Bill remains in the ownership of the shipping company for the normal duration, this aspect is unchanged.

The main impediment seen to this proposal is the 'trust' that the exporter has in the shipping company. The original Bill would now occur in a printed form not necessarily viewed and checked by an exporter's representative. Hence additional security may be considered desirable such as the exporter endorsing the remotely printed Bill particularly if payment has not been secured.

In this case the importing agency would have to collect the Bill separately from the other documents or possibly have the shipping company courier the Bill which would then need to be associated with the other documents. This is considered to be an additional but reasonable workload.

Other options may be explored:

- It is technically feasible to convert the finalised information contained in a Bill to a “.pdf” file and post this to a company secured Internet site. As the original information is complete in the company generated Forwarding Instruction, it would need to be verified and all additions, corrections and amendments made prior to the posting. This information then cross checked against the shipping company issued document for clearance purposes to obtain the release documents.

This would not permit automatic data entry to computer systems other than the exporter and shipping companies. However it may be possible to provide a Bill ‘extract’ in other formats to overcome certain limitations caused by this procedure.

- Produce the Bill information in a reference document so that this information may be associated with other information essential for the carriage, clearance and release of shipments.

This method may permit automatic selected data entry to computer systems.

Health Certificate

This certificate has been the main document focus of the project and this example document has highlighted some of the difficulties associated with achieving “paperless trading”. The Health Certificate is also known as a Veterinary Certificate, Certificate as to Condition, Sanitary and Phyto-Sanitary Certificate or SPS Certificate.

Issue

The Health Certificate is prepared and issued by the Australian government agency, AQIS, to provide assurances to the importing agency on the basis of inspection regimes, food safety and suitability for human consumption to the importing economy and to the recipient of the goods.

As well as government-to-government use, the Health Certificate was found to be used for different purposes in each of the economies studied. For example, importers of dairy products in Singapore advised they did not need such a certificate to clear shipments, similarly importers in Japan used it for tariff checks while Kraft Canada used a facsimile copy for initial clearance of shipped dairy products. The USA is in the process of revising its customs clearance requirements and currently importers of dairy products do not need a Health Certificate for clearing shipments.

The main issue is considered to arise from the need to maintain the document integrity while providing access to those who need the information contained in that document to process the shipments.

Maintaining the document integrity by limiting the document to government to government communication to the exclusion of many operational organisations and bodies involved in cross-border trading appears unsuitable at this stage of investigation. In particular, importers often call for the Health Certificate as a condition in the Letter of Credit. This means that the original Health Certificate must be presented at the bank of issue to obtain payment for the shipment.

Potential solution

The technology deployed for conveying the E-cert is the preferred technological means of achieving “paperless trading”, as it is an ‘open’ technology and readily achieved by most, if not all, APEC economies. It provides the capability to download data from a secured Internet site which is a distinct advantage to those economies who have that technical capability and wish to develop their computer based systems and thereby enhance their operational efficiencies.

The base objective to achieving “paperless trading” remains in tying the Health certificate with the other associated documents in the overall ‘set’ and providing complete information to those trading organisations that need it for their processes.

Posting the document to a common Internet site where it may be associated with similar documents would be a potential solution. However at this time it appears unlikely that AQIS would agree as they consider that this would jeopardise the Certificate’s security

due to virtually unrestricted access. Linking the Internet sites is another possible solution that has also been rejected by AQIS at this time for similar reasons.

Other options may be explored:

- Produce only the information necessary for non-government organisations in a more ‘open’ government controlled website with a distinct format – an ‘extract’ of the Health Certificate. If this information is distorted in any way the final recipient, presumed to be usually Customs or another government representative, may check on the secured AQIS Internet site. This may be expected to occur automatically if the accepting government agency has already downloaded the AQIS information from the Internet.

This method permits automatic data entry to computer systems.

- Produce only the information necessary for non-government organisations as a reference document – again an authorised ‘extract’ of the Health Certificate - so this information may be associated with other information essential for the carriage and clearance of shipments. This option may permit the government to government objective to be realised but would probably not be accepted by the banks and other institutions involved in cross-border trading.

This method would not permit automatic data entry to computer systems.

- Produce the certificate in a “.pdf” file so that it may be printed from a company secured Internet website but with a distinct format. The government officers in the importing economy would automatically detect any distortion of this record in the final clearance stages.

This method would not permit automatic data entry to computer systems.

Certificates of Analysis

These certificates are obtained from several sources, the most rigidly controlled certificate originating from the Dairy Technical Services, DTS, a private Melbourne based dairy testing laboratories who produce the NATA formatted certificates.

Issue

This certificate of analysis is prepared and issued by testing laboratories at the request of Murray Goulburn clients. The analysis undertaken and reported in the certificate of analysis assures the importer of the quality standard agreed for that negotiated shipment of dairy products.

The main issue with the certificate of analysis arises from the need to maintain the integrity of this commercially sensitive quality assurance document. The information contained in the certificate of analysis is generally required by the intended recipient who has requested the document and not by any intermediate supply chain organisation.

Potential solutions

Due to the fact that this is essentially a commercial document, it has limited impact on the overall transaction particularly by the importing economy's government.

- Posting the document to a secured Internet site operated either by the testing laboratories or the exporting company. Obviously the former method would be preferred however the costs of establishing and operating such a site may be disagreeable to the laboratories and some arrangements may have to be made to overcome any such objections. Where a secured export company site was used the Certificate could be associated with similar documents. Linking the company secured Internet site to that of the laboratory may be another option.
- Produce the certificate in a “.pdf” file so that it may be printed from a laboratory or company Internet website. Any distortion of this record could be automatically detected in the final acceptance stages by cross referencing the critical information with other documents being used in the transaction.

This method would not permit automatic data entry to computer systems however this is considered an acceptable limitation at this time.

Inspection Certificates

These certificates, also known as Clean Report of Findings, may be obtained from several sources including CASCO, Intertek, SGS or Bureau Veritas.

Issue

This certificate is prepared and issued by the inspection authorities as requested by the importing company.

This test assures the importer that the agreed quality standard has been achieved for that negotiated shipment of dairy products.

The main issue is the need to maintain the integrity of this commercially sensitive quality assurance document. The information contained in that document is generally required by the intended recipient who has requested the document and not by any intermediate supply chain organisation to process shipments.

Potential solutions

Similar to the Certificates of Analysis, this is essentially a commercial document with limited impact on the overall transaction particularly by the importing economy's government. Similar solutions are proposed:

- Posting the document to a secured Internet site operated either by the inspection authority or the exporting company. Again the former method would be preferred however the costs of establishing and operating such a site may be disagreeable and some arrangements may have to be made to overcome any such objections. Where a secured export company site was used the Certificate could be associated with similar documents. Linking the company secured Internet site to that of the inspection authority may be another option.
- Produce the certificate in a “.pdf” file so that it may be printed from an inspection company or export company Internet website. Any distortion of this record could be automatically detected in the final acceptance stages by cross referencing the critical information with other documents being used in the transaction.

This method would not permit automatic data entry to computer systems however this is considered an acceptable limitation at this time.

Conclusions

Significant broad outcomes of this project are:

- ❖ There are many government and non-government bodies involved in cross-border trading. Many of those bodies are actively seeking means to facilitate such trading relationships. During the execution of this project it was almost inevitable that some groups may have been inadvertently overlooked or insufficient attention appear to be paid to their importance in cross-border trading. This feature is partly due to the relatively undefined path of the 'supply chain' in cross-border trading, particularly as procedures often vary in detail to suit the economies involved. Another factor is the relative short period in which the project was performed, necessitating participants to be quickly sought to view and comment on the limited period of the "E-cert" demonstration. It must be recognised that these basic factors can naturally affect the attitudes of such bodies when they are approached to participate in a relatively undefined activity. More importance should be placed on these aspects for any other similar project.
- ❖ Cross-border trading is a very complex procedure that has become more complex over years due to advances in technology, changing risks and general advancements in business practices. Many bodies have undertaken the very significant task of seeking to simplify those complexities and thereby facilitate trade. Changes in technology have allowed potentially different means of conducting cross-border trading. This has complicated the situation, as it is extremely difficult to adopt revised processes to take advantage of new technology while maintaining traditional trading procedures. It is suggested that one means of progression may be achieved by moving existing documents into a format suitable for the new technological mediums. This is apparently the approach being used by the USA Customs Modernization Organisation where the DHS objective is to provide a 'single window' for importers and to a lesser extent in Canada. Change may often be better implemented by significantly changing the procedure to optimally match the technology. The suggested solutions reflect this conceptual approach.
- ❖ Four documents - Bill of Lading, Health Certificate, Certificates Of Analysis and Inspection Certificates - have been identified as critical to achieving "paperless trading", however other documents may emerge as this process is further developed and placed into practice. The four documents identified have different complexities and hence encounter different trading barriers. The "E-cert" has been used as an example document for demonstration and this has facilitated tracing the overall 'set' of documents. This investigation has highlighted the various needs of the 'supply chain' and indicated some of the uses of the different documents. It has also shown the difficulty of dealing with one document in isolation and the need to consider the complete 'set' of documents. The process has also indicated that different trade barriers may be encountered when implementing electronic documentation.

- ❖ Based on the present findings, it appears that each economy naturally tends to work with some degree of isolation which is further intensified by the different groups – government and non-government – who seek solutions to their own specific problems. Other international bodies seek to facilitate the trading process by addressing the challenges posed by certain essential layers such as message structures, data harmonisation and specific trade processes. While these individual approaches are indisputably ‘correct’ and ‘essential’, it raises the question of the possibility of establishing an overseeing organisation to provide broad guidelines for all these disparate activities? This is obviously an enormous task and could possibly only encompass the overall supply chains of selected specific economies in order to maintain pace with the rapidly changing technological environment. However by adopting such a concept it may be possible to improve the coordination and cooperation between APEC economies for their mutual advantage.
- ❖ ‘Open’ systems are considered essential for the success of ‘paperless trading’. The move from the complexities of EDI and the rise of the Internet are noted. XML appears to be offering a simpler technology to implement and world standardising organisations are developing formats to facilitate cross-border trading. However standard interface protocols do not exist and hence the information ‘sender’ must accommodate a wide range of ‘receivers’, or the ‘receiver’ a wide range of ‘senders’ if the communications are to succeed in seamlessly passing data from one computer system to another. This demand for ‘data mapping’ is seen to be an increasing challenge for cross-border and inter-company communications.

Endnote

Dialectrics Pty Ltd would like to thank the numerous people with whom it has communicated over the course of this project. These people represent a wide range of government bodies and commercial organisations within Australia, Canada, Japan, and the USA plus other APEC economies. Without their input the reports would not have been possible. Their support and assistance in providing verbal and written contributions in the form of information, editorial comments and discussions about particular aspects of complexities of 'cross-border' trading is greatly appreciated.

Finally it should be recognised that it is virtually impossible to explore and report on procedures as complex as cross-border trading within the timeframe without at least one reader among the vast number of people involved throughout the economies finding fault or possibly taking affront at some comment contained in the reports.

The reports are not intentionally critical of any body, process or procedure and have actively sought to avoid any comments that may be construed as criticism. It has endeavoured to be clear and succinct in its findings and constructive in its suggestions. However, it is recognised that mis-interpretation of the written word is possible in such a wide ranging document and it can only be re-stated that there are no criticisms made, intended or implied.

End of document

Glossary

The following Glossary contains selected terms of a relatively comprehensive list of Mnemonics, Acronyms and Abbreviations used in Export activities described in reports.

<i>Term</i>	<i>Description</i>
ACE	Automated Commercial Environment, USA,
ACS	Australian Customs Service [Aust. Computer Society}
ADC	Australian Dairy Corporation
ADPF	Australian Dairy Products Federation
AFFA	Agriculture, Fisheries and Forestry, Australia
AFTA	ASEAN Free Trade Area
AHECC	Australian Harmonised Export Commodity Classifications
ANSI X12	American National Standards Institute standard X12
APHIS	Animal, Plant and Health Inspection Service, USDA,
AQIS	Australian Quarantine and Inspection Service
ASEAN	Association of South East Asian Nations
BL [B/L]	Bill of Lading
Bolero	Bills of Lading Electronic Registry Organisation
CBP	Customs and Border Protection, USA,
CCRA	Canada Customs and Revenue Agency
CFIA	Canadian Food Inspection Agency
COC	Certificate Of Condition
COO	Certificate Of Origin [Chief Operating Officer]
CRF	Clean Report of Findings
CTB	Customs and Tariff Bureau, Japan,
CUSDEC	CUSStoms DEClaration - a UN/EDIFACT message format
DFAT	Department of Foreign Affairs and Trade
DHL	International 'document courier company'
DOTARS	Department of Transport and Regional Services, Australia,
DTS	Dairy Technical Services

<i>Term</i>	<i>Description</i>
ECD	Export Clearance Declaration
ECN	Export Clearance Number
EDI	Electronic Data Interchange
EDIFACT	UN Economic Commission for Europe, EDI standard (UN-EDIFACT)
EDI-SCA	EDI for Sea Cargo Australia
Edisoft	Standard software package for Australian exporters
ERA	Export Receival Advice
EXDOC	AQIS standard software package for Australian exporters
EXIT	EXport IT software program from AT&T approved/used by ACS
EXTEDI	Export EDI (Tradegate Australia project. Includes maritime exports)
FDA	Food and Drug Administration, USA,
FSIS	Food Safety and Inspection Service, USDA,
HS	Harmonised Commodity Description and Coding System
ICC	International Chamber of Commerce
ISO	International Standards Organisation
IT	Information Technology
LC [L/C]	Letter of Credit
MAF	Ministry of Agriculture and Forestry, New Zealand
MAFF	Ministry Of Agriculture, Forestry And Fisheries, Japan,
MEA	Multilateral Environmental Agreement
MHLW	Ministry of Health, Labor and Welfare, Japan,
NATA	National Association of Testing Authorities (Australia)
NCAP	National Customs Automation Program, USA,
NCCS	Nippon Automated Cargo Clearance System, Japan,
NGO	Non-Governmental Organisations (“Western world”)
PECC	Pacific Economic Cooperative Council
RFC	Request For Certification
RFP	Request For Permit
SA	Standards Australia

<i>Term</i>	<i>Description</i>
SANCRT	Sanitary/Phytosanitary Certificate - a UN/EDIFACT message format
SGS	Société Generale de Surveillance
SWIFT	Society for Worldwide Interbank Financial Telecommunications
UCP	Uniform Customs and Practice (From ICC)
UN/EDIFACT	UN/Electronic Data Interchange For Administration, Commerce and Transport
UNSM	United Nations Standard Message
USDA	United States Department of Agriculture
VDIA	Victorian Dairy Industry Authority
XML	eXtensible Markup Language

Reference Material

Documents

[In alphabetical order]

The reports have made use of information from many sources, some of which was contained in the following reference documents.

A Study of the Trade and Environment Issue June 2002.

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A relatively comprehensive listing of Internet reference sites has been used in producing the reports and readers requiring further information are directed to those documents.

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AFTA CER Business Council	ACBC	www.dfat.gov.au/cer_afta/
Agriculture, Fisheries and Forestry, Australia	AFFA	www.affa.gov.au
APEC Competition and Law Database	APEC	www.apeccp.org.tw
AQIS E-cert	E-cert	www.aqis.gov.au/ecert
ASEAN Free Trade Area	AFTA	www.aseansec.org/
Asia Pacific Economic Cooperation.	APEC	www.apec.org www.apecsec.org.sg
Association of Southeast Asian Nations	ASEAN	www.asean.or.id
Australia New Zealand Food Authority	ANZFA	www.anzfa.gov.au
Australian Customs Service	ACS	www.customs.gov.au
Australian Quarantine and Inspection Service	AQIS	www.aqis.gov.au
Bolero	BOLERO	www.boleroltd.com
Canadian Customs and Revenue Agency	CCRA	www.ccra-adrc.gc.ca
Canadian Food Inspection Service	CFIA	www.inspection.gc.ca
Codex Alimentarius Commission [Sets international food standards.]	CODEX	www.codexalimentarius.net
Customs and Tariff Bureau - Japan	CTB	www.customs.go.jp

<i>Organisation</i>	<i>Acronym</i>	<i>Internet reference</i>
Department of Foreign Affairs and Trade	DFAT	www.dfat.gov.au
Ecert, New Zealand,	E-cert	www.nzfsa.govt.nz/ecert
Erie Foods	ERIE	www.eriefoods.com
Food and Drug Administration (USA)	FDA	www.fda.gov
International Chamber of Commerce	ICC	www.iccwbo.org
International Trade Data System	ITDS	www.itds.treas.gov
Japan External Trade Organisation,	JETRO	www.jetro.go.jp
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Kraft Foods	KRAFT	www.kraft.com
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Ministry of Agriculture & Forestry (NZ)	MAF	www.maf.govt.nz
Ministry Of Agriculture, Forestry And Fisheries (Japan)	MAFF	www.maff.go.jp
Ministry of Health, Labor and Welfare (Japan)	MHLW	www.mhlw.go.jp
Mitsubishi Corporation	MC	www.mitsubishicorp.com
Standards Australia	SA	www.standards.org.au
Trade Practices Act	TPA	www.australia.gov.au
Tradegate		www.tradegate.com.au
Tradenet, Singapore,		www.tradenet.com.sg
United Nations Commission on International Trade Law	UN CITRAL	www.uncitral.org
US Customs and Border Protection	CBP	www.customs.gov www.cbp.gov
US Department of Agriculture	USDA	www.usda.gov
USDA Animal, Plant and Health Inspection Service	APHIS	www.aphis.usda.gov
USDA Food Safety and Inspection Service	FSIS	www.fsis.usda.gov
World Customs Organization	WCO	www.wcoomd.org
World Trade Organization	WTO	www.wto.org

Attachment 1 - An Australian Customs Perspective of Institutional Barriers

Compiled from an internal report kindly supplied by Gareth Lewis, Director, Australian Customs Service dated 25 June 2003

I first became aware of the APEC TWG “E-Cert” Project during a meeting with AQIS on 10 December 2002. Since that time, I have had an escalating degree of involvement in the project owing to the customs import clearance implications in the countries of destination of Murray Goulburn’s dairy produce as well as my official role in information management both in Australian Customs and the World Customs Organisation, or WCO.

Historically, WCO has had involvement in non-Customs messages, SANCRT being the most relevant example. I raised the E-Cert at the June WCO Information Management Sub-Committee (IMSC) as a formal agenda item, including the ECeDEx specifications document as background. I was seeking:

- Endorsement from members that this is an IMSC matter.
- Agreement that E-Cert presents several strategic issues for the WCO, including XML, the question of non-Customs data issues and the issue of customs international role in regulatory data collection across the board.
- In the longer term, that WCO would manage the process of approval of E-Cert as a standard through the UN/CEFACT system in Geneva, as it does for all customs messages.

The basic outcome from the IMSC is clear:

1. E-Cert is a WCO matter and Secretariat have said they are “willing to do what is required” including at UN/CEFACT.
2. As a preliminary task, Australia and NZ have been asked to perform a data mapping exercise of the E-Cert against the WCO Data Model.
3. The IMSC have asked that we advise the differences (codes, structures etc) between E-Cert and SANCRT

These activities present some work for NZ Customs, NZ FSA, Australian Customs and AQIS, however successful completion of these tasks should remove those aspects as ‘institutional barriers.’

To facilitate acceptance of the E-Cert with the Japanese CTB and other relevant Japanese Government Agencies, I would suggest that the CTB continue to be consulted. From an Australian Customs’ point of view, our focus will be to progress E-Cert through the WCO to obtain WCO and UN/CEFACT sanction for the document.

The executive management in ACS have agreed that we continue to work with the various players in NZ, Australia and at WCO in this matter.

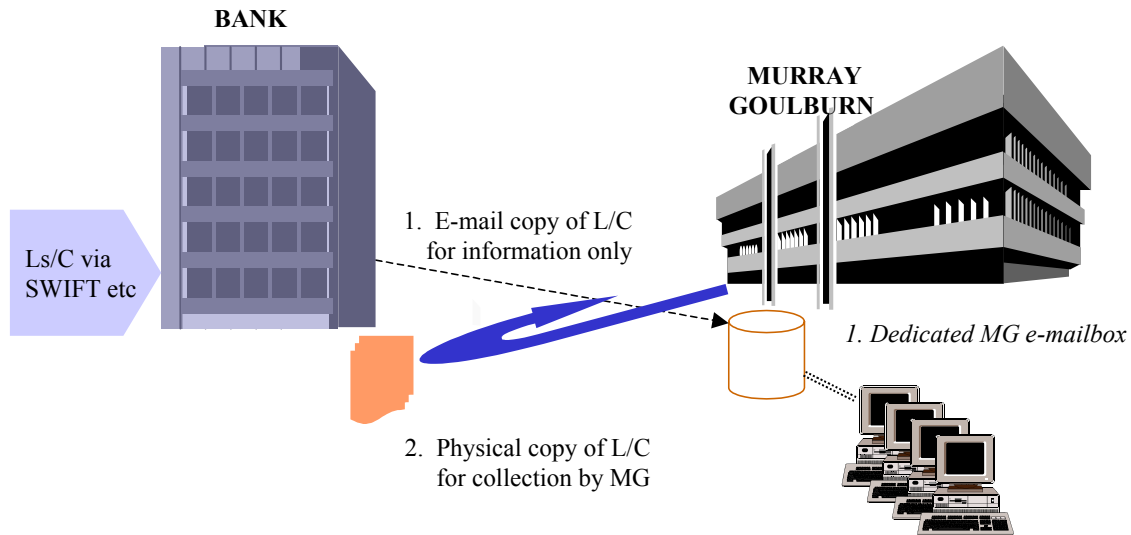
The Customs view of institutional barriers for the implementation of E-Cert is restricted in the main to the WCO and UN/CEFACT processes documented above. As has been advised already to AQIS, from an operational and systems point of view, E-Cert does not present any form of barrier in terms of export clearance from Australia.

I see that the biggest problem might be the time it takes to progress a message through the WCO and UN/CEFACT formal processes. It might be possible to mitigate that impact by explaining to those with an interest in the project that endorsement procedures are underway, and perhaps the intended Government to Government practice can continue on the expectation of a successful outcome at WCO and UN/CEFACT.

Attachment 2 - An Electronic Approach to Letters of Credit

In March 2000, Murray Goulburn proposed an innovative means of acquiring the information contained in Letters of Credit using electronic communication techniques. This method, now implemented between Murray Goulburn and participating banks, has proved very successful in practice with significant benefits to all organisations.

As Australia's largest exporter of dairy products, Murray Goulburn uses the services of many banks. Therefore the company constantly seeks to facilitate their key banking procedures. The company has focussed on adopting a common method of processing Letters of Credit for export payments that has proven to be very successful and benefits both the banks and the company. This is based on the following simple diagram:



When the bank receives a Letter of Credit, it conveys the information by e-mail to a special dedicated Murray Goulburn e-mailbox. An appropriately secured copy of the Letter of Credit, such as a TIFF file, is simply attached to the e-mail message. Murray Goulburn have committed to undertake due care to implement and operate this process. This e-mail alerts the company that a physical Letter of Credit is available.

Murray Goulburn benefits by gaining information about the Letter of Credit earlier than previously possible. This information facilitates preparation of export documentation using consistent methods and minimises any delay in gaining the Letter of Credit.

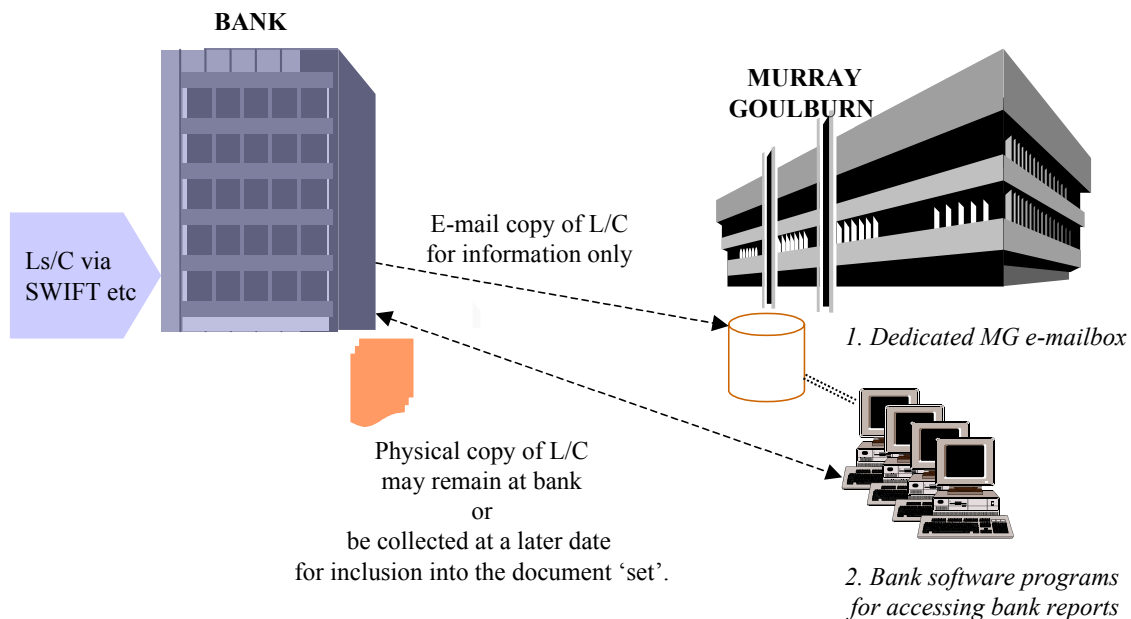
Banks receive the benefit of automating information transfer from their present systems, such as SWIFT, through to customers, hence providing an enhanced service. Costs of notifying customers of the availability of the Letter of Credit are lower due to less manual intervention in the overall process.

The Letter of Credit provides information used in several export documents. Currently this necessitates the Murray Goulburn operatives reading the Letter of Credit, noting the information relative to the export document they are preparing and then keying the data

into the appropriate part of that document. This is a very labour intensive operation and obviously prone to error.

With the electronic techniques that have been available for some years, this tedious method may be easily avoided. It is therefore proposed that the banks send a copy of the structured document directly to a suitably configured database at Murray Goulburn. The SWIFT structure is already a computer-accepted format however Murray Goulburn do not want to be connected in any way to the SWIFT network. Therefore it is suggested that a simple mechanism be established, similar to the present system, to forward a structured document to a Murray Goulburn database file.

Thus the diagram is slightly changed to become:



To achieve the information in a structured form from as many banks as possible, Murray Goulburn now seeks to implement the simplest, consistent and most robust practical system. This system to be the lowest cost commensurate with maximum benefits to all participating organisations.

The fundamental aim is to collect the data contained in a Letter of Credit so that the data may be transferred into the appropriate export documents with minimum human involvement and maximum efficiency. The present process has proven successful, hence the direction is to expand on this methodology.

Attachment 3 - An Electronic Approach to Bills of Lading

In late 1999, Murray Goulburn sought to enhance the existing processes and approached the major shipping companies with a proposal to have the responsibility to be able to remotely print shipping companies' Bills of Lading.

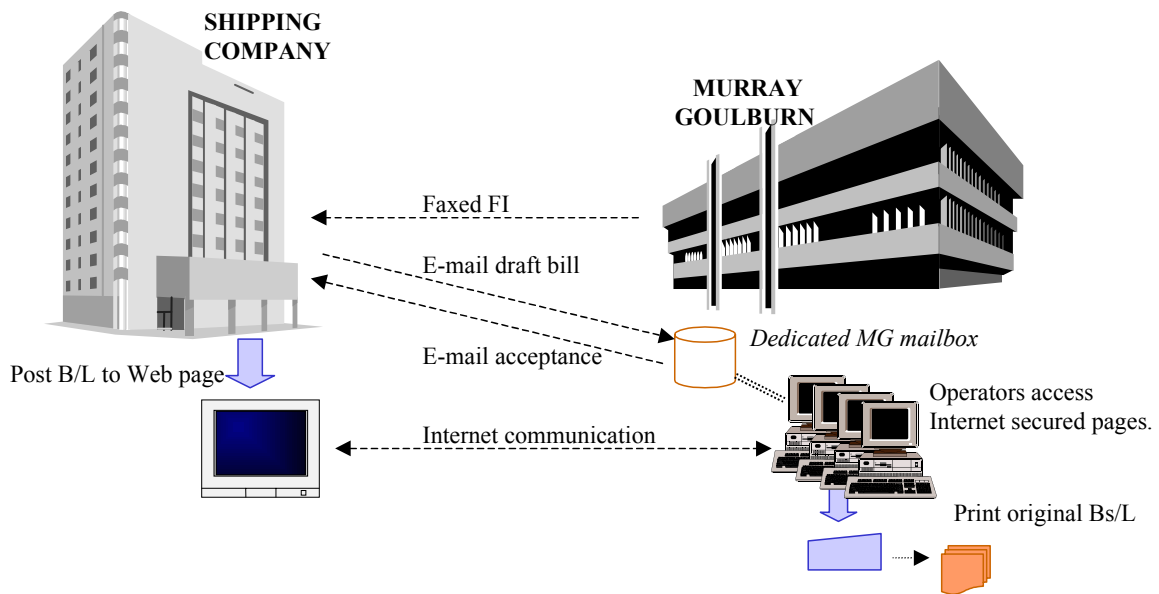
As Australia's largest exporter of dairy products, Murray Goulburn uses the services of many shipping companies. The company wanted to harmonise some of their key export shipping documentation procedures by adopting a common processing methodology in the rapidly changing electronic environment. After examining several methods proposed by various shipping companies, it was found that one particular model best suited the documentation processes both in the shorter and longer term.

The immediate aim was to adopt electronic methods relating to Bill of Lading documentation from submission of Forwarding Instructions to printing and acceptance of the final Bill of Lading. This was to be achieved by utilising e-mail and the Internet for communication between Murray Goulburn and its business partners.

Murray Goulburn proposed that:

- a) The present facsimile communication of Forwarding Instructions to the shipping companies to be retained for an initial period.
- b) Shipping companies prepare a draft Bill of Lading from the Forwarding Instruction and communicate this via e-mail to a dedicated e-mailbox at Murray Goulburn. Several operatives within Murray Goulburn may access this e-mailbox and therefore the load is spread over several people and the documents more rapidly accessed.
- c) Murray Goulburn make any amendments, corrections and approvals, then return the document to the shipping company again using e-mail to a nominated e-mail box at the shipping company. The reply is then simply initiated using the "reply to sender" option on the received e-mail. Any amendments required are typed in the e-mail separate to the draft bill, which is not altered in any way. If a new draft Bill of Lading is not required, this is stated in the e-mail, otherwise a new draft will be sent automatically. If no amendments are required this is stated in the e-mail and the Bills of Lading are therefore ready to be issued after vessel departure.
- d) The shipping company then posts the finalised Bill of Lading to a suitably secured shipping company page on the Internet. Simultaneously, or before the posting, the shipping company will notify Murray Goulburn of the Internet posting by e-mail to that dedicated mailbox.
- e) Murray Goulburn may then print the necessary number of original, non-negotiable and other advices on special shipping stationery or other paper as previously agreed with that specific shipping company. The set of originals would be digitally signed so that they are suitable for acceptance by the banks.

The following simple diagram illustrates model outlined:



For Murray Goulburn, the main benefit is the access to the draft Bills of Lading earlier than previously possible. This facilitates the company operatives in replying to the Bill of Lading and preparing the associated export documentation using the most consistent and uniform method. Any delay in notifying availability of a Bill of Lading is reduced.

For the shipping companies, the potential benefits are the possible automation of conveying incoming information from their present systems through to customers and hence providing an enhanced service. Cost of notifying customers of the availability of the Bills of Lading is lower due to less manual intervention in the overall process.

As this process has proven successful, the objective now is to further develop and expand this electronic methodology.

Using electronic techniques that have been available for some years, it is proposed that Murray Goulburn electronically transmit the Forwarding Instruction in a suitably agreed format to the shipping organisation.

It is expected that the shipping company would then electronically process the data contained in the Forwarding Instruction into the relative Bill of Lading. This procedure is seen to save significant costs in terms of time and labour plus reduce errors in document preparation.

Paperless Trading Demonstration Project - Electronic Transmission of the SANCRT Message

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