# International Single Window Development<sup>+</sup>

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## I. Introduction

This paper has been prepared as a general introduction to some of the key and varied legal issues related to implementation of a *Single Window* and, to a large degree, the legal issues that States implementing National Single Windows (NSWs) may face. The importance of creating an enabling legal infrastructure for the Single Window cannot be understated. It is possible today to create the technological infrastructure that will effectively and efficiently process customs documents and forms as well as business and other documents important in the global supply chain. While this technology development effort is challenging, it is equally challenging to create a legal environment for the Single Window that will provide for legal interoperability in cross-border exchanges of customs and other types of data electronically.

Choices made among various technological approaches, including specific system architectures decisions, in the development of a Single Window can affect the legal options for creating the legal infrastructure needed for a particular Single Window facility. Similarly, legal requirements in a particular country's legislation and/or regulations can determine what technology options can be used in developing its Single Window. For example, if a country's legislation mandates that digital signatures using a private key infrastructure (PKI) approach, then the use of alternative technical approaches to digital signatures will be limited. It is suggested that Single Window development programs work simultaneously on both the technical and legal frameworks in addressing issues related to this "intersection" of law and technology.

Within this context this paper also explores the general background on the development of the Single Window with special attention to the legal issues involved. The importance of utilizing "international standards" in the development of the Single Window is also noted. This may be particularly important where a National Single Window is being designed to facilitate international (cross-border) transactions. Not all legal issues have been fully resolved; there is still substantial

<sup>&</sup>lt;sup>†</sup> This paper is based on an earlier paper prepared for the ASEAN Legal and Regulatory Working Group on the ASEAN Single Window under a Program funded by USAID and managed for USAID by Nathan Associates Inc. of Arlington, Virginia. The original paper was titled "ASEAN Single Window: The Intersection of Law and Technology" (2008) and is available at: <u>http://pdf.usaid.gov/pdf\_docs/PNADM816.pdf</u>.

work to be done at the international level to achieve wider harmonization of the legal approaches to the Single Window for international trade. The electronic Single Window environment might be described, in a broad way, as an *application* within the electronic commerce field. In this context, it should be noted that the legal framework issues for the Single Window do not necessarily represent an area for 'new law.' However, there may be opportunities for further international work in electronic commerce law that will provide important benefits for Single Window development and global trade development.

# II. Background Developments for the Single Window

Technical development of the Single Window<sup>1</sup> in one form or another has been underway for over 10 years. While using Information and Communications Technology (ICT) is certainly not the only methodology for developing a Single Window<sup>2</sup> an ICT approach has been given emphasis at least in part by the Revised Kyoto Convention<sup>3</sup> and other international efforts. Additionally, the growing use of electronic commerce methods in international business transactions has demonstrated the increasing importance of ICT as a basis for Single Window operations. Organizations such as the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT)<sup>4</sup> and the

<sup>&</sup>lt;sup>1</sup> One generally accepted definition of the "Single Window" is provided by the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) in its Recommendation 33:

<sup>&</sup>quot;[A] Single Window is defined as a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfill all import, expert, and transitrelated regulatory requirements. If information is electronic, then individual data elements should only be submitted once."

Recommendation and Guidelines on Establishing a Single Window to Enhance the Efficient Exchange of Information between Trade and Government, Recommendation No. 33, (ECE/ TRADE/352, July 2005) hereinafter "CEFACT Recommendation 33", available at http://www.unece.org/cefact/recommendations/rec\_\_index.htm.

<sup>&</sup>lt;sup>2</sup> Using a "paper Single Window system" may be an appropriate alternative for some countries. "A Single Window does not *necessarily* imply the implementation and use of high-tech information and communication technology (ICT), although facilitation can often be greatly enhanced if Governments identify and adopt *relevant* ICT technologies for a Single Window." CEFACT Recommendation 35, *supra* note 1, at 3.

<sup>&</sup>lt;sup>3</sup> International Convention on the Simplification and Harmonization of Customs Procedures, *as amended* (1999), available at http://www.wcoomd.org/kybodycontent.htm. The revised Kyoto Convention, developed by the World Customs Organization, entered into force on February 3, 2006 and as of 18 January 2011, 72 States had become contracting parties by ratifying the Convention.

<sup>&</sup>lt;sup>4</sup> UN/CEFACT is a unit within the United Nations Economic Commission for Europe. Its website can be accessed at unece.org/cefact/.

World Customs Organization (WCO)<sup>5</sup>, among others, have active programs that focus on the general benefits and the technical aspects of "paperless trade."<sup>6</sup>

A great deal of concern and energy regarding the development and implementation of Single Window facilities has focused on the importance of technical "interoperability" across borders.<sup>7</sup> The reasons for this are obvious, at least in terms of using a country's Single Window facility for efficient cross-border trade transactions with Single Window facilities in other countries. Work in this area has grown in various organizations. For example, UN/CEFACT has developed Recommendation 34 (Recommendation and Guidelines on Single Window Data Harmonization) based on the need to establish data harmonization methodology at the national, regional, and international levels.<sup>8</sup>

However, it is only recently that the necessity for creating an enabling legal infrastructure has emerged as an important element for the success of a Single Window facilities at the national level and, to the extent possible, for a harmonized legal infrastructure at the regional and international levels. Further, harmonization of the legal framework for purposes of operating a Single Window across borders, particularly if the system is ICT-based, often requires review of other aspects of the legal environment for the "supply chains" and other relevant stakeholders served by the Single Window.<sup>9</sup>

<sup>7</sup> See UN/CEFACT, "Symposium on Single Window Standards and Interoperability" (3-5 May 2006), available at http://www.unece.org/trade/workshop/sw\_2006/agenda.pdf. CEFACT highlights the importance of this issue in its program website by noting:

On day one, the Symposium introduced the Single Window (SW) concept to countries, which were considering establishing such facilities. During the following two days, participants discussed the *key implementation and interoperability issues, noting the importance of facilitating the exchange of information between the SW systems through the use of international standards*. The meeting proposed the creation of a Stakeholders Group to assist Single Window operators in the simplification and harmonization of cross-border data exchange and in the development of a Cross Border Reference Data Model to allow *data interoperability for end-to-end trade transactions*.

#### [Emphasis added.]

<sup>8</sup> "Symposium Conclusions," UN/CEFACT Symposium on Single Window Standards and Interoperability, (Geneva, May 3-5, 2006), available at <u>http://www.unece.org/trade/workshop/sw\_2006/sw\_conclusions.pdf</u>. UN/CEFACT has concluded development of Recommendation 34 and is currently pending 'intercessional approval' tentatively scheduled for approximately 11 February 2011.

<sup>9</sup> See, Dr. Bart Schermer, "Legal Issues of Single Window Facilities for International Trade," UNCITRAL CONGRESS – MODERN LAW FOR GLOBAL COMMERCE (July 2007) (hereinafter, "CEFACT Legal Group Paper") at 4. The paper is available under the program topic "Electronic Commerce: Going Beyond

<sup>&</sup>lt;sup>5</sup> See, e.g., The WCO Data Model, available at <u>http://www.wcoomd.org/home\_wco\_topics\_</u>pfoverviewboxes\_tools\_and\_instruments\_pftoolsdatamodel.htm.

<sup>&</sup>lt;sup>6</sup> See, e.g., "Workshop on International Standards to Stimulate Paperless Trade," Kuala Lumpur, Malaysia (20-21February 2006). Full program information is available at

http://www.unece.org/trade/workshop/malaysia\_feb06/ welcome.htm; *see generally* "A Roadmap Towards Paperless Trade," United Nations Economic Commission for Europe, ECE/TRADE/371 (2006), available at http://www.unece.org/cefact/publica/ece\_trd\_371e.pdf.

And as is inevitably the case for assessing and developing the legal framework for the Single Window, the technology choices that are made for the Single Window facility can directly affect the choices and/or alternatives for structuring the appropriate legal framework for the Single Window. This is clearly an area in which it is important to consider issues related to the intersection of law and technology.

The concept of the Single Window in trade is relatively straightforward. In her remarks introducing CEFACT Recommendation 33, Brigita Schmšgnerov, Executive Secretary of the United Nations Economic Commission for Europe, noted that the Single Window provides that, "… trade-related information and/or documents need only be submitted *once* at a single entry point to fulfill all import, export, and transit-related regulatory requirements."<sup>10</sup> Recommendation 33 expands on Ms. Schmšgnerov's comments and defines the Single Window as:

Within the context of this Recommendation 33, a Single Window is defined as a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfill all import, expert, and transit-related regulatory requirements. If information is electronic, then individual data elements should only be submitted once.<sup>11</sup>

The benefits for establishing a National Single Window have been identified by various organizations. In Recommendation 33, UN/CEFACT describes the general benefits that can accrue to governments and the private sector this way:

The implementation of a Single Window can be highly beneficial for both Governments and trade. For Governments it can bring better risk management, improved levels of security and increased revenue yields with enhanced trader compliance. Trading communities benefit from transparent and predictable interpretation and application of rules, and better deployment of human and financial resources, resulting in appreciable gains in productivity and competitiveness.

The value of such a facility for governments and traders has taken on increased importance in the new security environment with its emphasis on advance information and risk analysis.

To address legal issues related to the Single Window, the UN/CEFACT Legal Group began work in 2006, in cooperation with CEFACT's TBG 15,<sup>12</sup> on the development of a new UN Recommendation that would provide general guidance on the legal issues related to the Single

Functional Equivalence" and may be accessed at http://www.uncitral.org/uncitral/en/ about/congresspapers.html.

<sup>10</sup> Foreward, Recommendation and Guidelines on Establishing a Single Window to Enhance the Efficient Exchange of Information between Trade and Government – Recommendation No. 33, at page iv (ECE/TRADE/352, July 2005) hereinafter "CEFACT Recommendation 33", available at http://www.unece.org/cefact/recommendations /rec\_index.htm.

<sup>11</sup> Id. at 1.

<sup>12</sup> International Trade and Business Processes Group's International Trade Procedures Working Group (TBG-15) developed CEFACT's Recommendation 33 on Establishing a Single Window as noted above. *See supra* note 1.

Window for international trade. This new Recommendation 35<sup>13</sup> is an important effort to identify various legal issues that may be barriers to the implementation of a Single Window operation and to suggest that governments should try to analyze and address these issues at the start of the development of their National Single Windows.

Other organizations have also focused on the Single Window in the past several years. For example, the World Trade Organization (WTO) has received numerous submissions regarding the Single Window for international trade in its current Negotiation on Trade Facilitation.<sup>14</sup>

The work programs of other international bodies, while not directly related to the Single Window development, do intersect with the broader legal issues that are important to the operation of an international Single Window. In the area of ICT, for example, the United Nations Commission on International Trade Law (UNCITRAL)<sup>15</sup> has completed a important international convention<sup>16</sup> and several Model Laws<sup>17</sup> that provide important guidance and set an international standard in the field of electronic commerce law. To the extent that having an "e-Commerce-ready legal environment" is important to trade and business development (i.e., an enabling legal infrastructure) as well as

<sup>16</sup> The United Nations Convention on the Use of Electronic Communications in International Contracts was adopted by the UN General Assembly on November 23, 2005. See Resolution Adopted by the General Assembly [on the report of the Sixth Committee (A/60/515)] 60/21. United Nations Convention on the Use of Electronic Communications in International Contracts, Official Records of the General Assembly, 60th Session, A/RES/60/21 (hereinafter, "Electronic Communications Convention.") Two countries have ratified this Convention and sixteen more have signed the Convention. Three ratifications are needed for the Convention to come into force.

This new convention not only provides international legal standards for electronic transactions, but also enables integration of the new e-Commerce provisions in a wide range of earlier treaties. The Convention and an explanatory note by the UNCITRAL Secretariat are available online at http://www.uncitral.org/pdf/english/ texts/electcom/06-57452\_Ebook.pdf.

<sup>17</sup> The UNCITRAL Model Law on Electronic Commerce with a Guide to Enactment (1996, with additional Article 5 *bis* done in 1999) and the UNCITRAL Model Law on Electronic Signatures (2001) may be accessed at http://www.uncitral.org/uncitral/en/uncitral texts/electronic commerce.html.

Provisions of this Model Law have been enacted in 35 countries and in many territories and dependencies. Further, the United States *Uniform Electronic Transactions Act*, which is strongly influenced by the Model Law, has been adopted in 47 states. Similarly, several Provinces in Canada have enacted Canada's *Uniform Electronic Commerce Act*, which is based on the Model Law.

The Model Law on Electronic Signatures has been the basis for or influenced legislation in 15 countries.

<sup>&</sup>lt;sup>13</sup> "Recommendation 35 – Establishing a legal framework for international trade Single Window" was developed jointly by the UN/CEFACT Legal Group and its TBG15. It received final approval on 8 October 2010 and is available at http://www.unece.org/cefact/recommendations/rec\_index.htm.

<sup>&</sup>lt;sup>14</sup> See generally WTO Negotiation on Trade Facilitation, available at http://www.wto.org/English/tratop\_e/tradfa\_e/ tradfa\_e.htm#meeting. The work in this WTO negotiation is related primarily to country treaty obligations under Articles V, VIII and X of the General Agreement on Trade and Tariffs (GATT.)

<sup>&</sup>lt;sup>15</sup> UNCITRAL's general mandate is "to further the progressive harmonization and unification of the law of international trade." It is the "core legal body within the United Nations system for international trade law." Additional information regarding UNCITRAL and its work is available at http://www.uncitral.org/uncitral/en/ index.html.

important to the use of ICT for national and international Single Window facilities, the UNCITRAL texts provide important international policy guidance.

Further, the WCO and UNCITRAL have initiated a Joint Legal Task Force to work on the legal framework for the international Single Window. Building in part on the work done at UN/CEFACT on the legal issues related to the Single Window, this Joint Legal Task Force is expected to prepare a detailed international reference or guidance document on the legal issues related to the international Single Window. This work is focusing not only on the legal issues related to cross-border exchange of data between governments (G2G), but also on legal issues of importance to other stakeholders in the Single Window environment, including industry sectors (B2G, G2B, B2B.)

# III. Legal Issues in the Single Window Environment

## 1. Initial Considerations

It is useful to explore the essential legal issues related to the creation and operation of a Single Window in order to fully understand the key legal issues relevant to such efforts. This also presents an opportunity to consider how the technical architecture of the Single Window can affect the range of legal issues that must be addressed. This exercise may also be useful to individual governments that have or are in the process of establishing national Single Windows (NSW), particularly where the potential for enabling cross-border transactions will be a key benefit.

Many of the following legal issues<sup>18</sup> are generic to the legal infrastructure for both NSW development and for cross-border (or international) Single Window development since there can be substantial overlap between them. It is clear, of course, that there are specific areas in the following discussion in which national law operates. For example, the actual creation of the legal infrastructure for the NSW will be firmly based in domestic law and regulation.

At the same time, as noted above, it is important to craft national legislation and regulations in a way that will enable the NSW to be interoperable with other NSWs, that is, national legislation or regulations should authorize cross-border electronic transactions as well as domestic transactions within its Single Window. As with the technical development of an NSW—one designed to be interoperable across borders—the national legal infrastructure should be constructed with a view to using international standards.

## 2. Enabling Legislation or Regulation

Establishing an NSW generally requires some type of enabling legislation or regulation (depending a country's particular legal regime) that establishes the legality and validity of a Single Window

<sup>&</sup>lt;sup>18</sup> CEFACT Recommendation 35 provides, in its Annex B, a listing of these issues. *See supra*, note 13. The following is largely based on the Annex B issues.

operation in a country. Since a country's Single Window facility, in most cases, will involve more government agencies than its Customs Administration, national legislation and/or regulations will usually be an important first step. This is essential to eliminating legal uncertainty about the legal status of the Single Window in national law and will be important to international trade development and legal interoperability with other international Single Windows.

Additionally, such national legislation will need to take into account related laws that may be administered by governmental agencies other than the Customs Administration but that interact with the national Customs Administration. This is needed to ensure that these other government agencies (OGAs) have a mandate either to share information with the Customs Administration or to be able to obtain information from the Customs Administration. This ensures consistency (and cooperation) between those OGAs that may be outside a country's Customs Administration. This may be particularly important where the national Single Window must assure another country's Single Window facility that all sharing of information between government agencies will be compliant with national law.

Further, most countries have other laws or policies (e.g., those related to taxation, privacy, national security) that may be implicated by its Single Window operations and these should be evaluated as well. A thorough evaluation in this area may show the need for amending existing legislation or regulations or adopting new legal mechanisms to address these areas.

Where the use of Information and Communications Technologies (ICT) by the NSW is anticipated, countries may wish (and probably should) develop an "electronic commerce" legal regime and, where needed, existing electronic transaction laws should be reviewed. It is important that national law permit all relevant transactions involving the Single Window (e.g., B2G, G2G, G2B, possibly B2B transactions) to be done electronically, both domestically and across borders.

#### 3. Information sharing, Data Protection, and Privacy

One of the key areas of legal concern in the Single Window for national and international operations is related to information sharing. At one level information sharing should be authorized in national legislation. But the details of an information-sharing process should be established for agencies<sup>19</sup> that are authorized to provide or receive Single Window data. These mechanisms can include regulations, memoranda of understanding (MoU) and interconnection security agreements (ISAs) between agencies.<sup>20</sup> There are many examples of MoUs and each Single Window facility should develop one that meets the requirements of national law and regulation.

<sup>&</sup>lt;sup>19</sup> When considering a private or public-private organization to operate a national (or regional) Single Window, these same considerations apply.

<sup>&</sup>lt;sup>20</sup> See, e.g., "Security Guide for Interconnecting Information Technology Systems," National Institute of Standards and Technology, NIST Special Publication 800-47 (August 2002), available at http://csrc.nist.gov/publications /nistpubs/800-47/sp800-47.pdf. Appendix B of this document includes a sample of an System Interconnection Implementation Plan. This document is widely used for purposes of developing systems security protocols for Customs operations.

Additionally, data protection issues arise in the context of the Single Window. Most frequently, these issues focus on access to data, integrity of the data being processed by the Single Window, and the accuracy of the data. As noted previously, a legal framework is necessary to permit access to data (e.g., by other governmental agencies) where such access has been authorized by law or regulation. Similarly, though it is often considered a technical issue, policies (regulations) should be adopted that ensure the integrity of the data through a series of data quality checks, audit trails, logging mechanisms, etc., that ensure only authorized access as well as maintaining the integrity of the data. Failure to do so could result in potential liability accruing to the Single Window facility operator.<sup>21</sup>

Ensuring the accuracy of the data entered into the Single Window (and distributed from it) is important for a variety of reasons, though the data received by the Single Window from an outside user cannot always be controlled. The accuracy of information received by any customs organization has always been important. It may be appropriate to examine those laws and regulations relating to errors and omissions of information submitted to the Single Window operation to be certain that such laws are consistent with current standards.<sup>22</sup> Additionally, a carefully drafted "end-user agreement" should be developed for all non-governmental entities that may provide information to (e.g., declarations) or receive information (e.g., export permits, clearance and release documents, etc.) from the Single Window.

Another reason that the arrangements noted above should be examined and made part of national law requirements and regulations relates to the cross-border aspects of a Single Window facility. Where it is anticipated that a Single Window facility will be interoperable with other countries' Single Windows, some level of certainly need to be provided to those country Single Window operations and to other stakeholders involved in the international supply chain that information and data will be controlled effectively to prevent unauthorized access to or dissemination of trading partner data. For example, these stakeholders may include suppliers, customers, shippers, financial facilities, etc., whose data may be exchanged with and circulated among agencies connected to the Single Window.

Further, information-sharing activities between governmental units may have implications for privacy laws and commercial confidentiality and thus, a careful examination of the legal framework related to privacy in a particular country should be undertaken. But not only are issues related to privacy law important in many national jurisdictions, they also may be particularly

<sup>&</sup>lt;sup>21</sup> See generally Thomas Smedinghoff, "Where We're Headed: New Development and Trends in the Law of Information Security," PRIVACY & DATA SECURITY LAW JOURNAL (January 2007), available online at <a href="http://www.wildman.com/resources/articles-pdf/Where\_We're\_Headed\_-">http://www.wildman.com/resources/articles-pdf/Where\_We're\_Headed\_-</a>

<sup>&</sup>lt;u>New\_Developments\_and\_Trends\_in\_the\_Law\_of\_Information\_Security\_PUBLISHED\_VERSION.pdf</u>, at 103-106. While this article is focused on company information security legal issues, it provides guidance on the general direction in which the law is moving. Additionally, where the development of SW facilities involves all stakeholders, these issues will be important to those in the commercial sectors.

<sup>&</sup>lt;sup>22</sup> Consideration should be given to possible issues related to security, fraud, and other willful behaviors that can affect the effectiveness of the Single Window.

important in other countries or regions with which the Single Window may interact.<sup>23</sup> It is critical that data processed through the Single Window comply with relevant privacy and data protection laws. Privacy and data protection law differs in many countries and regions and, therefore, this area of law should be examined in establishing the legal framework for the Single Window's operations.

Ensuring the confidentiality, integrity, availability, and privacy of information and data are fundamental to protecting the information assets of government and private sector participants. The Single Window trade data system should provide information security protection commensurate with the risk and magnitude of the harm resulting from the unauthorized access, use, disclosure, theft or loss of sensitive information collected or used in the system. Appropriate information security includes the security controls.

Privacy<sup>24</sup> and security should be built into the Single Window trade data system. Privacy must be considered when system design requirements are being developed and decisions are being made about the data and information that will be collected, and how it will be used in the system and shared between and among members of the trade community, participating governments and other organizations involved in the Single Window.

In light of these considerations, the legal infrastructure for the Single Window in each country could include laws and implementing regulations and policies that provide adequate privacy and security protections for all sensitive and personally identifiable information, financial, confidential, trade secret, proprietary, and law enforcement data and information in the system.

This legal framework should also ensure compliance with the privacy laws and policies of countries and organizations around the world (such as the European Privacy Directive and individual country privacy laws) that apply to data in the Single Window. This may be less of a daunting task than might appear at first but in implementing the Single Window this should be taken into account.

Finally, issues related to *authentication* and *identification* in the electronic environment should be addressed. In the context of Single Window operating procedures, the question is whether there are systems in place that can reliably ensure that those individuals accessing the Single Window have the authority to do so. Many organizations have opted for a system that uses a user name (or ID) and a password, referred to as "single factor" authentication. It is difficult to determine in the abstract whether *single factor* authentication or identification is reliable enough for those accessing the Single Window within the Single Window facility itself (whether it is government operated or

<sup>&</sup>lt;sup>23</sup> For example, where data associated with shipments to or from European Union countries are processed through a Single Window, it may be appropriate to consider how the EU Privacy Directive may effect transactions through the Single Window. See Directive 95/46/ED of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, Official Journal of the European Communities of 23 November 1995 No L 281,31, available at http://www.cdt.org/privacy/eudirective/EU\_Directive\_.html (Unofficial text).

<sup>&</sup>lt;sup>24</sup> When "privacy" is referred to in this paper, concepts of commercial confidentiality should be understood as included in this term.

operated by a nongovernmental agency or a public-private entity) or from other governmental agencies. The most appropriate approach for making this determination is to develop a risk assessment analysis to examine whether a more robust authentication or identification approach (a *multifactor authentication* system) is needed.<sup>25</sup>

Naturally, this issue is one that arises in the context of end-users of the Single Window, that is, the organizations (e.g., manufacturers, traders, agents, shippers, buyers) that may access the Single Window by way of submitting data (e.g., Declarations) or receiving information from the Single Window.<sup>26</sup>

#### 4. Organizational Issues for the Single Window

Countries will usually select the organizational approach for the Single Window that is appropriate to existing requirements and needs. It is not necessary that the organizational arrangement be identical in every country, just as the technical structures may not be identical. Generally, there are three approaches: (1) a governmental entity (such as the Customs Administration, port authorities, etc.); (2) a private company or agency (provided it has the legal authority to carryout the functions of the Single Window functions); or (3) a quasi-public or public-private organization.<sup>27</sup> Regardless of the organizational approach or form that is adopted, of course, it must have the mandate and authority of national law to operate the national Single Window.

In those situations where a National Single Window is to be operated by a private<sup>28</sup> or a joint public-private entity, carefully drafted legal agreements need to be made between the government and those nongovernmental entities involved.<sup>29</sup> There should be a clear understanding of the

<sup>&</sup>lt;sup>25</sup> See Smedinghoff, supra note 30, at 116-118. See also Monetary Authority of Singapore, Circular No. SRD TR 02/2005 (November 25, 2005), available at

http://www.mas.gov.sg/resource/legislation\_guidelines/banks/circulars/ Circular2FA25Nov05.pdf (mandating that banking institutions use two-factor authentication for Internet banking transactions).

<sup>&</sup>lt;sup>26</sup> Further discussion of this aspect of Single Window operations appears below in Subsection B-2, *Electronic Signatures and Cross-Border Authentication*.

<sup>&</sup>lt;sup>27</sup> CEFACT Recommendation 33, *supra* note 1, at 10. It should be noted that several of these approaches have been utilized in existing National Single Windows.

<sup>&</sup>lt;sup>28</sup> In the process of choosing a private entity, care should be taken to comply with all public procurement laws and regulations. This is particularly important, since these private entities will be entrusted with a significant responsibility for operating an important governmental function. For general guidance in this area, it may be helpful to consult several UNCITRAL texts: UNCITRAL Model Legislative Provisions on Privately Financed Infrastructure Projects (2003), available at

http://www.uncitral.org/uncitral/en/uncitral\_texts/procurement\_ infrastructure/2003Model\_PFIP.html; and the UNCITRAL Legislative Guide on Privately Financed Infrastructure Projects (2000), available at http://www.uncitral.org/uncitral/en/uncitral\_texts/procurement\_infrastructure/2001 Guide\_PFIP.html. *See also* UNCITRAL Model Law on Procurement of Goods, Construction and Services (1994), available at http://www.uncitral.org/uncitral/en/uncitral\_texts/procurement\_infrastructure.html. This Model Law is currently under revision (since 2004) and the working papers related to this ongoing work are available at http:// www.uncitral.org/uncitral/en/commission/working\_groups/1Procurement.html.

<sup>&</sup>lt;sup>29</sup> Naturally, the authorization to enter into such agreements should be recognized in national law.

authority delegated to the private entities involved and its limits. Provisions that ensure transparency and an appropriate form of corporate or company governance should be included.

Finally, it will be important to develop agreements (end-user agreements) with parties interacting with the Single Window (suppliers, customs brokers, shippers, freight forwarders, financial facilities in more advanced Single Window models, etc.) These agreements should contain all of the contractual obligations of the parties (particularly where a private or quasi-private organization operates the Single Window), the extent of the liability of any party to a transaction, and so on. Consideration should be given to including a mediation or arbitration requirement (or both) in the event of a dispute arising between the parties. Finally, an end-user agreement may include certain limitation of liability provisions, provided that they do not violate law or public policy.

### 5. Liability Issues

It should be noted that the potential for legal liability might arise in several contexts in the operation of the Single Window. Perhaps the most obvious are those related to data processing errors and possible data breaches, such as those suggested above. In certain instances, for example, data processing errors can result in monetary losses to parties using the Single Window.<sup>30</sup> Naturally, this highlights the importance of the technological development of the Single Window to minimize the potential for damages and, as noted earlier, to avoid injuries related to problems in the area of information sharing. It is possible, too, that the use of inaccurate, incomplete, or incorrect data by a variety of those entities using the Single Window may result in multiple cases in which damages may occur.

These issues can be compounded in the international context where the Single Window operates across borders. Buyers, sellers, shippers, freight forwarders, financial institutions, and others, as well as Single Window facilities in other countries, can suffer damages and may seek recourse from the Single Window operation(s) that may have caused these injuries. Some injured parties may be third parties who have not agreed to the provisions of an end-user agreement but nevertheless suffer some type of injury resulting from the operation of the Single Window. Consideration should be given to dealing with the legal implications resulting from possible injury to this group and these solutions may be similar to those that are currently in place for traditional import/export situations.

This discussion is not intended to be discouraging, merely realistic. Thus, it is important to consider these issues in examining the legal infrastructure for the Single Window and to address the potential for legal recourse at both the national and international levels. In terms of the organizational issues noted above, agreements between the Single Window facility and end-users can address such issues and include provisions for the limitation of liabilities and indemnification for damages. Similarly, at the international level, agreements<sup>31</sup> between Single Window operations

<sup>&</sup>lt;sup>30</sup> Losses may also occur in terms of lost government revenues from taxes, duties, etc.

<sup>&</sup>lt;sup>31</sup> Depending on the organizational nature of the Single Window facilities involved, *e.g.*, a government entity or a private entity, different types of "agreements" may be used. Where Single Window facilities are

that are interacting together should address these issues. Governments establishing a Single Window facility may consider using agreements that include alternative dispute resolution mechanisms to avoid the possibility of costly litigation.

### 6. Competition Law Issues

There are two primary areas in which competition law may raise concerns and should be addressed. First, it is important when developing the legal infrastructure for the Single Window to consider the implications of a country's WTO obligations under the General Agreement on Tariffs and Trade (GATT.) Articles V, VIII and  $X^{32}$  are of particular importance. The Single Window has the potential for enhancing and facilitating the efficiency by which its obligations are met under these GATT Articles. The transparency of Single Window operations, as related to the publication and administration, will be particularly important under Article X.

Second, concerns may be raised about the operation of a Single Window that relate to possible protectionism for local companies vis-à-vis foreign organizations or other anticompetitive activities.<sup>33</sup> This highlights the importance of transparency for the Single Window operation. These concerns, if not addressed, can result in disabling effects on trade development and facilitation.

## 7. Electronic Documents

As noted in the introduction to this working paper, it contains a bias toward the use of modern Information and Communications Technologies. Although the principles contained in, for example, UN/CEFACT's Recommendation 33 and Recommendation 35 can be applied to the paper environment, the use of Information and Communications Technologies is strongly supported in many countries.

In the Single Window environment, much work has been done to create electronic documents that "match" paper documents used in the Customs Administration functions. As noted earlier, organizations such as the WCO and UN/CEFACT, among others, have focused on creating the technical electronic messages and electronic records that would serve Single Window operations.

operated by government agencies, liability issues may be addressed by contractual arrangements or as part of bilateral or multilateral agreements between the governments involved.

<sup>&</sup>lt;sup>32</sup> The text of the GATT is available at http://www.wto.org/English/docs\_e/legal\_e/gatt47\_01\_e.htm. These particular articles implicate Single Window operations as they do for traditional Customs Administration operations. Article V deals with "Freedom of Transit"; Article VIII, with "Fees and Formalities Connected with Importation and Exportation; and Article X, with "Publication and Administration of Trade Regulations." Further, the WTO is currently conducting a trade negotiation regarding these Articles. *See supra* note 14.

<sup>&</sup>lt;sup>33</sup> Similar issues may be raised in other aspects of a country's electronic commerce law. For example, legislation in some countries requires that where documents requiring digital signatures backed by a Certificate, the Certification Authority must have offices in that country in order for there to be 'mutual recognition.'

However, it is important that a national legal regime permit the use of such electronic documents, that is, that national law affirmatively confirm that there is functional equivalence between a paper document and an electronic document so that an electronic document (or record) is not denied validity for legal purposes (including introduced into a court or other judicial proceeding) solely because it is in electronic form.<sup>34</sup>

There may be other reasons why an electronic document or record may not be considered valid as "evidence" in various proceedings. For example, Smedinghoff<sup>35</sup> asks six questions that should be answered in seeking to determine whether an electronic document might be accorded such status:

- Is the Transaction Authorized in Electronic Form?
- Will the Online Process Result in an Enforceable Contract?
- Are the Transaction Records Accessible to All Parties?
- Has a Valid Electronic Signature Been Used?
- Is the Transaction Trustworthy?
- Have Appropriate Electronic Records Been Retained?<sup>36</sup>

While not all of these questions would be appropriate for the Single Window facility, they might be important to the end users of the Single Window.

Furthermore, the area of functional equivalence between paper documents and electronic documents is one of the *sine qua non* aspects of moving to a "paperless" transactions environment. Thus, it is important for countries implementing the Single Window and contemplating the use of ICT to ensure that appropriate enabling national law exists to support the legal use of electronic

<sup>35</sup> Smedinghoff, "E-Transactions: The Key Rules for Ensuring Enforceability," Electronic Banking and Commerce Report, Vol. 11, No. 5 (Thompson/West Legal Works, 2006.)

<sup>&</sup>lt;sup>34</sup>Article 5. Legal recognition of data messages, UNCITRAL Model Law on Electronic Commerce with Guide to Enactment 1996 with additional article 5 bis (1999), ("Information shall not be denied legal effect, validity or enforceability solely on the grounds that it is in the form of a data message." See also Article 11), available at http://www.uncitral.org/pdf/english/texts/electcom/05-89450 Ebook.pdf; Article 9, § 1, Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ('Directive on electronic commerce') Official Journal L 178, 17/07/2000 P. 0001 – 0016 ("Member States shall in particular ensure that the legal requirements applicable to the contractual process neither create obstacles for the use of electronic contracts nor result in such contracts being deprived of legal effectiveness and validity on account of their having been made by electronic means."), available at http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32000L0031:EN:HTML; United States Uniform Electronic Transactions Act, §7 – Legal Recognition of Electronic Records, Electronic Signatures, and Electronic Contracts (National Conference of the Commissioners of the Uniform State Laws, 1999) ("(a) A record or signature may not be denied legal effect or enforceability solely because it is in electronic form. (b) A contract may not be denied legal effect or enforceability solely because an electronic record was used in its formation. (c) If a law requires a record to be in writing, an electronic record satisfies the law. (d) If a law requires a signature, an electronic signature satisfies the law."), available at http://www.law.upenn.edu/bll/archives/ulc/ fnact99/1990s/ueta99.htm.

records. In this respect, the UNCITRAL Model Law on Electronic Commerce<sup>37</sup> has become an international standard in this area. However, it should be noted that those States enacting national laws based on this UNCITRAL Model Law have not done so uniformly and have varied the provisions of the Model Law. It is important, to the extent that cross-border transactions are based on national e-Commerce enabling laws, that they be carefully examined to ensure that those enactments are interoperable with similar laws in trading partner countries.

### 8. Intellectual Property Rights Issues

There are some instances in which it is useful to examine various intellectual property issues. In today's world, information and data can be valuable commodities, and the ownership of such information can give rise to intellectual property (IP) rights issues. In some countries, for example, government agencies other than the Customs Administration may claim ownership of certain data, such as trade data. As a result, these agencies may wish to exercise control over some types of information that flow through the Single Window. A careful examination of statutes and regulations regarding control or owners of such data should be undertaken.

This may be particularly important in those Single Window implementations where a private entity or a public-private entity operates the Single Window. In this case, the agreements with the operating entity should address the ownership of data flowing through the Single Window.

An additional intellectual property issue may arise where technology (hardware or software) is purchased for use in the Single Window facility. Care should be taken to ensure that the vendor has all the IP rights necessary (e.g., patents and copyrights) to sell or to license the product to the Single Window facility. Ordinarily, certain IP "warranties" should be provided to the Single Window facility in the purchase or license agreement. The legal risk here is that there may be third parties who have IP interests in or related to the technology being purchased by the Single Window.

## 9. Data Retention

Data retention and electronic archiving laws and policies differ considerably from country to country and at the international level. Nevertheless, an evaluation of national data retention requirements is essential to the operation of the Single Window. There may be several sources of law for retaining or archiving information and data. Where government information requirements are established in statutory law or regulation, it should be clear. Less clear, however, are the requirements that might be needed in the commercial law system of a particular country. This will be important to the users of the Single Window and, to the extent that a Single Window facility a regional facility, it will be important to develop a legal strategy that seeks the harmonization of such laws or regulations in the region (e.g., through a multilateral treaty or by individual State actions that harmonize the law in this area).

<sup>&</sup>lt;sup>37</sup> See supra note 17.

With respect to data retention generally, there is a difference between "personal" information and "business" information. There are records that must be kept, records that are forbidden to be kept, and records that may be destroyed if done in a timely fashion and in accordance with established procedures (if not, they must be kept.) An example of records forbidden to be kept is that, in Europe, keeping some kinds of personal information may be a violation of Article 8 of the European Convention on Human Rights.<sup>38</sup> Examples of records that may be destroyed are frequent in matters resulting in litigation in the United States. In addition, some countries have rules that forbid tampering or dictate the manner in which particular kinds of data must be retained.

In many countries, terms such as "data-conservation principle" or "data-retention principle" ordinarily refer to a legal requirement that personal data be destroyed at the end of a specified period; this may be considered an aspect of the purpose-specification principle. As early as 1973, a Council of Europe resolution provided, "Rules should be laid down to specify the periods beyond which certain categories of information [stored in electronic data banks in the private sector] should no longer be kept or used."<sup>39</sup>

The Council of Europe's Convention on Data Protection<sup>40</sup> provides in Article 5, "Personal data undergoing automatic processing shall be ... preserved in a form which permits identification of the data subjects for no longer than is required for the purpose for which those data are stored." After a brief flirtation with the idea that this "does not mean that data should after some time be irrevocably separated from the name of the person to whom they relate, but only that it should not be possible to link readily the data and the identifiers,"<sup>41</sup> most of the European documents now<sup>42</sup>

<sup>40</sup> Council of Europe, Convention for the Protection of Individuals with Regard to Automatic Processing of Personal Data, Strasbourg, 28 Jan. 1981, entered into force 1 Oct. 1985, CETS No. 108; Amendments to the Convention for the Protection of Individuals with Regard to Automatic Processing of Personal Data, Strasbourg, 15 June 1999; Additional Protocol to the Convention for the Protection of Individuals with Regard to Automatic Processing of Personal Data Regarding Supervisory Authorities and Transborder Data Flows, Strasbourg, 8 Nov. 2001, entered into force 1 July 2004, CETS No. 181.

<sup>41</sup> Council of Europe, Explanatory Report on the Convention for the Protection of Individuals with Regard to Automatic Processing of Personal Data, para. 42.

<sup>42</sup> Even at the time of the Council of Europe Convention on Data Protection, other international documents called for stronger measures than merely making it no longer possible "to link readily the data and the identifiers." In particular, the Explanatory Memorandum included (pp. 21-49) in Organization for Economic Co-operation and Development, Guidelines on the Protection of Privacy and Transborder Flows of Personal Data (2001), states at 42:

Finally, when data no longer serve a purpose, and if it is practicable, it may be necessary to have them destroyed (erased) or given an anonymous form. The reason is that control over data may be lost when data are no longer of interest; this may lead to risks of theft, unauthorised copying or the like.

The text of the OECD *Guidelines* does not expressly address data retention; rather, the above is presented as explanation of the ninth guideline:

<sup>&</sup>lt;sup>38</sup> Convention for the Protection of Human Rights and Fundamental Freedoms, 4 Nov. 1950, CETS No. 5 (1950).

<sup>&</sup>lt;sup>39</sup> Council of Europe, Comm. of Ministers, Res. (73) 22 on the Protection of the Privacy of Individuals visà-vis Electronic Data Banks in the Private Sector, 26 Sept. 1973.

support the position that the data must indeed be deleted and that rendering them no longer "readily" identifiable is insufficient.

While these examples relate primarily to personal information, they do point to the importance generally of adopting a clear approach to data retention related to the Single Window. Finally, data retention strategies may be important in the event that a legal dispute arises from the use of the Single Window. In such instances, a legal proceeding may require that data be provided as evidence and care should be taken to ensure as far as possible that policies are established and followed that will provide credible and reliable evidence in such proceedings.

#### 10. Electronic Signatures and Cross-Border Authentication

In the era of electronic transactions, the use of "electronic signatures" in lieu of handwritten signatures has become increasingly important. Generically, *signatures* fulfill a number of different purposes or functions. It has been noted that electronic signatures, particularly "digital signatures" often provide more functions than handwritten signatures generally.<sup>43</sup> Thus when adopting an appropriate legal infrastructure for the use of electronic signatures, it is important to consider what functions are critical for the type of transactions involved. For example, handwritten signatures have been used on paper-based customs documents for many years. In the electronic environment it might be asked what additional functions or security is needed beyond those provided by handwritten signatures. In terms of technologies, a "digital signature" is merely one type of electronic signature, one that is generally considered to use asymmetric cryptography for authentication purposes, such as public key infrastructure (PKI) systems.

The concepts of "functional equivalence"<sup>44</sup> and "technological neutrality"<sup>45</sup> have been important to the development of global electronic commerce and have become almost fundamental principles in

#### **Purpose Specification Principle**

9. The purposes for which personal data are collected should be specified not later than at the time of data collection and the subsequent use limited to the fulfilment of those purposes or such others as are not incompatible with those purposes and as are specified on each occasion of change of purpose.

The later United Nations Guidelines for the Regulation of Computerized Personal Data Files, GA Res. 44/132, UN GAOR, 44th Sess., Supp. No. 49, UN Doc. A/44/49 (1989), also calls, in Principle 3, for specification of the purpose and use of a file "in order to make it possible subsequently to ensure that," *inter alia*, the "period for which the personal data are kept does not exceed that which would enable the achievement of the purposes so specified."

<sup>43</sup> See generally, "Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods," UNCITRAL (2009), available as a PDF at <a href="http://www.uncitral.org/uncitral/en/uncitral\_texts/electronic\_commerce.html">http://www.uncitral.org/uncitral/en/uncitral\_texts/electronic\_commerce.html</a>. This UNCITRAL Reference Document provides an extensive and thorough examination of electronic signatures and their legal effect in cross-border transactions as well as a discussion of the electronic signature practices adopted in many countries and regions; see also UNCITRAL Model Law on Electronic Commerce with Guide to Enactment with Additional Article 5 bis as adopted in 1998, paras. 53-56, available at <a href="http://www.uncitral.org/pdf/english/texts/electcom/05-89450">http://www.uncitral.org/pdf/english/texts/electcom/05-89450</a> Ebook.pdf.

<sup>44</sup> That is, in its simplest terms, that the electronic method chosen for a particular transaction should be the equivalent of the paper method.

international texts.<sup>46</sup> Thus, it is important that close attention should be given to the types of electronic signatures and authentication measures that should be used in any particular country's electronic commerce legal environment. It is important to adopt approaches that are interoperable, technology neutral, and, when looking at cross-border transactions especially, processes that are nondiscriminatory.<sup>47</sup> For e-Government activities, such as the Single Window, careful attention should be given to the appropriate approach, including the new developments in the area of Identify Management. But further study is necessary to determine which combination of approaches may be the most beneficial for individual countries or regional groups that are establishing Single Window environments for trade.<sup>48</sup>

#### 11. Electronic Transfer of Rights in Goods (e-Documents of Title)49

Recent Single Window development activities, particularly those focused on "paperless trade", contemplate an advanced view of the opportunities for the use of ICT in the context of the Single Window that includes a broader stakeholder group, that is moving beyond just the governmental functions related to customs processing and including other parties in the supply chain. Such efforts have the potential for improving business as well as Single Window processing efficiencies in the global supply chain through the electronic transfer of rights in goods. It is not difficult to imagine

<sup>47</sup> Citing an OECD study, the UNCITRAL Secretariat notes that a non-discriminatory approach to foreign signatures and certification services means that,

The legislative frameworks do not deny legal effectiveness to signatures originating from services based in other countries as long as these signatures have been created under the same conditions as those given legal effect domestically. On this basis, the approach appears to be non-discriminatory, as long as local requirements, or their equivalent, are met.

"Promoting confidence in electronic commerce: legal issues on international use of electronic authentication and signature methods," UNCITRAL (2009), available as a PDF at <a href="http://www.uncitral.org/uncitral/en/uncitral\_texts/electronic\_commerce.html">http://www.uncitral.org/uncitral/en/uncitral\_texts/electronic\_commerce.html</a> at para. 149(a), citing Organization for Economic Cooperation and Development, Working Party on Information Security and Privacy, *The Use of Authentication across Borders in OECD Countries* (DSTI/ICCP/REG(2005)4/FINAL), at 5, available at http://www.oecd.org/dataoecd/1/10/35809749.pdf.

<sup>48</sup> See generally, R. Field, *Electronic Signatures and Mutual Recognition*, Workshop for Legal Matters on the ASEAN Single Window, Kuala Lumpur, Malaysia, January 2008.

<sup>49</sup> Portions of this section rely in part of an unpublished paper co-authored with Peter W. Schroth, MCompL, JSD.

<sup>&</sup>lt;sup>45</sup> It has been an important idea in the development of electronic commerce that no one technology or technological approach be mandated for all circumstances or transactions. One of the reasons for this is to avoid the problem of hindering the development and implementation of new and more efficient and secure technological innovations.

<sup>&</sup>lt;sup>46</sup> See e.g., UNCITRAL Model Law on Electronic Commerce with Guide to Enactment with Additional Article 5 bis as adopted in 1999, available at http://www.uncitral.org/pdf/english/texts/electcom/05-89450\_Ebook.pdf; Electronic Communications Convention, *supra* note 16.

the advantages if suppliers, brokers, shippers, freight forwarders, warehousemen, port operations, and financial facilities could reasonably rely on electronic documents of title, bills of lading, etc.<sup>50</sup>

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The state of the law internationally for electronic transferability of rights in goods, however, is not yet at a point where agreement exists about a legal framework in which this can be accomplished, despite its potential. There have been regional and individual country efforts in this area.

The Organization of American States (OAS), for example, has pursued initiatives related to the transfer of rights in tangible goods that involve the potential use of electronic communications. In 2002, the OAS adopted the Inter-American Uniform Through Bill of Lading for the International Carriage of Goods by the Road (Negotiable)<sup>51</sup> at its 6th Inter-American Specialized Conference on Private International Law (CIDIP VI<sup>52</sup>.). A key objective for creating this uniform bill of lading was to unify contract law in this area, so as to enhance the predictability in the legal process related to the transportation of import and export goods when the mode of transportation is by road.<sup>53</sup>

Two areas of this convention deal with electronic issues. First, Article 2 defines a "writing" as including "a written document, telegram, telex, telephonic facsimile (fax), electronic data interchange, or *a document created or transferred by electronic means*."<sup>54</sup> [*Emphasis added*.] Additionally, this treaty provides for the possibility of electronic signatures, as well as other signature types, if authorized by applicable law.<sup>55</sup>

The OAS has adopted a Model Inter-American Law on Secured Transactions,<sup>56</sup> including an appendix on electronic documents and signatures. Of particular interest is the adoption of the concept of security interest<sup>57</sup> as in Article 9 of the U.S. Uniform Commercial Code, which is

<sup>&</sup>lt;sup>50</sup> In the customs environment, some types of documents of title such as bills of lading, are sometimes useful to customs officials, for example, in the clearance and release process and in post-clearance audits. In an electronic Single Window environment, therefore, electronic documents of title could be helpful.

<sup>&</sup>lt;sup>51</sup> Inter-American Uniform Through Bill of Lading for the International Carriage of goods by the Road (Negotiable), available at http://www.oas.org/DIL/CIDIP-VI-billoflanding-Eng.htm.

<sup>&</sup>lt;sup>52</sup> Conferencias Especializadas Interamericanas sobre Derecho Internacional Privado.

<sup>&</sup>lt;sup>53</sup> See "Summary," at http://www.oas.org/DIL/CIDIP-VI-billoflanding-Eng\_summary.htm.

<sup>&</sup>lt;sup>54</sup> Article 2.1.9, *supra* note 76.

<sup>&</sup>lt;sup>55</sup> Article 18.1 provides, "The parties agree that any signature on or by this Bill of Lading may appear handwritten, printed on facsimile, perforated, stamped in symbols, or registered in any other mechanical or electronic means authorized by the applicable law. The parties agree to be bound by the same as if they had physically handwritten their signatures."

<sup>&</sup>lt;sup>56</sup> http://www.oas.org/DIL/CIDIP-VI-securedtransactions\_Eng.htm. This Model Law was approved by the Plenary Meeting of Delegates on 8 February 2002 as resolution CIDIP-VI/RES.5/02, which can be accessed at http://www.oas.org/main/main. asp?sLang=E&sLink=http://www.oas.org/dil/. The Model Law itself may be accessed (in Spanish and English) at http://www.oas.org/dil/Annex\_cidipviRES.%205-02.pdf.

<sup>&</sup>lt;sup>57</sup> *Id.*, art. 2.

foreign to English law and most other legal systems. Each state party must operate a registry that includes an electronic folio.<sup>58</sup>

The Annex, Uniform Inter-American Rules for Electronic Documents and Signatures (IREDS), to this Model Law was approved by resolution CIDIP-VI/RES. 6/02 at this diplomatic conference.<sup>59</sup> These Rules support the use of electronic communications technologies for both the Inter-American Uniform Through Bill of Lading for the International Carriage of Goods by the Road (Negotiable) and the Model Inter-American Law on Secured Transactions and to "serve as part of an integrated body of international commercial law."

Most recently, the OAS is considering the use of electronic registries in anticipation of its 7<sup>th</sup> Inter-American Specialized Conference on Private International Law (CIDIP VII.).<sup>60</sup> A number of international nongovernmental organizations have created systems to address this area. Both Bolero<sup>61</sup> and the Comité Maritime International<sup>62</sup> offer a contractual approach designed to create by contract an effect equivalent to an electronic bill of lading.

Some individual countries have sought to develop approaches to electronic transferable records. Korea, for example, has initiated an "integrated" e-Trade approach that includes national legislation that upgrades its legal infrastructure for international trade.<sup>63</sup> For transferable electronic documents, Korea has established a national electronic repository (registry) for such records and electronic transfers of title in goods are made through this registry.<sup>64</sup>

In the United States, Article 7 of the Uniform Commercial Code (UCC) on warehouse receipts, bills of lading, and other documents of title was based on two earlier uniform acts, the Uniform Warehouse Receipts Act (1906) and the Uniform Bills of Lading Act (1909). Although the UCC

<sup>61</sup> http://www.bolero.net/.

<sup>62</sup> http://www.comitemaritime.org/. The CMI Rules for Electronic Bills of Lading are available at http://www.comitemaritime.org/cmidocs/rulesebla.html.

<sup>63</sup> See Dr. Jae-hyun Lee, "Korea's National Single Window for Paperless Trading," Presentation at a Regional Workshop of the United Nations Economic and Social Commission for West Asia (July 2006); see *also*, "Present and possible future work on electronic commerce" Note by the Secretariat, A/CN.9/692, paras. 26-47 (UNCITRAL 43<sup>rd</sup> Plenary Session, June/July 2010), available at

<sup>&</sup>lt;sup>58</sup> *Id.*, art. 43.

<sup>59</sup> http://www.oas.org/main/main.asp?sLang=E&sLink=http://www.oas.org/dil/.

<sup>&</sup>lt;sup>60</sup> See CIDIP VII Working Groups, available at http://www.oas.org/dil/CIDIP-VII\_stage3.htm; *see generally* Everette Wolhers, "The Registry: Essential Element in Secured Transactions", CIDIP-VII Working Group on Secured Transactions Registries, available at http://64.233.169.104/search?q=cache:AEDpMJI-ny8J:oas.org/

 $dil/Everett\_Wholers\_paper.pdf+oas+secured+transaction+registry\&hl=en\&ct=clnk\&cd=1\&gl=us\&client=safari.$ 

<sup>&</sup>lt;u>http://www.uncitral.org/uncitral/en/commission/sessions/43rd.html</u>. (Section B. *Legal framework for the operation of electronic bills of lading in the Republic of Korea* describes the Korean national law enabling e-bills of lading and the operation of its system.)

<sup>&</sup>lt;sup>64</sup> Act on Facilitation of Electronic Trade, Act No. 77, 23 December 2005.

was first published in 1951, Article 7 was not revised until 2003. The revisions are concerned in particular with electronic documents of title.

The issues addressed in revised Article 7 include recognition of electronic documents of title, extension of the statute of frauds, authentication of electronic original documents and interchangeability between electronic and paper ("tangible") documents of title. Electronic records and signatures are now treated as equivalent to tangible documents and written signatures. Article 7 expressly modifies, limits, and supersedes the U.S. federal Electronic Signatures in Global and National Commerce Act (E-SIGN),<sup>65</sup> as permitted in the federal act.

Building on provisions for investment securities under Article 8 and for secured transactions under Article 9 of the UCC, Article 7 provides that a person has control of a document of title "if a system employed for evidencing the transfer of interests in the electronic document reliably establishes that person as the person to which the electronic document was issued or transferred."<sup>66</sup> Such a system exists when it establishes a "single authoritative copy … which is unique, identifiable and … unalterable."<sup>67</sup> Copies that are not authoritative, including copies of the authoritative copy, must be readily identifiable as not being authoritative.

The single authoritative document may be identified by a single custodian of the electronic record, who enters all transfers of the document and identifies the person in control on its records; by encryption technology, which may provide other methods for meeting these standards; or by a hybrid system of encryption and custodian. Further, electronic documents of title may be converted to paper documents of title and vice versa. In particular, Article 7 requires that an electronic document state that it is a substitute for the tangible document.

There is growing interest internationally for the development of an approach to transferable electronic records so that an international standard will exist that provides for legal certainty and predictability. One solution that is getting attention is the use of electronic registry systems.<sup>68</sup> An example is the recent UNIDROIT Convention on International Interests in Mobile Equipment<sup>69</sup> (the "Cape Town Convention.") The Convention created an electronic registry system to give notice to third parties of the existence of secured interests in movable property.

<sup>69</sup> Convention on International Interests in Mobile Equipment (Cape Town 2001) available at www.unidroit.org/english/conventions/mobile-equipment/main.htm; *see also* Protocol to the Convention on International Interests in Mobile Equipment on Matters specific to Aircraft Equipment (Cape Town, 2001), also available at this website.

<sup>&</sup>lt;sup>65</sup> 15 U.S.C. § 7001 et seq.

<sup>&</sup>lt;sup>66</sup> Uniform Commercial Code, sec. 7-106(a).

<sup>&</sup>lt;sup>67</sup> *Id.*, sec. 7-106(b)(1).

<sup>&</sup>lt;sup>68</sup> Professor Amelia Boss, "Becoming Operational: Electronic Registries and Transfer of Rights," UNCITRAL CONGRESS – MODERN LAW FOR GLOBAL COMMERCE (July 2007). The paper is available under the program topic "Electronic Commerce: Going Beyond Functional Equivalence" and may be accessed at http://www.uncitral.org/uncitral/en/ about/congresspapers.html.

There are clear benefits to be achieved in both the national and international Single Window environments, and for "paperless trade," from the development of an international approach to the electronic transferability of rights in goods that will provide legal certainty and predictability.

# IV. International Legal Standards

In the Single Window development process, international standards are increasingly considered critical to the Single Window's success particularly when it is envisioned as a tool for cross-border trade and development. This is true for the technical aspects of the Single Window and for developing a robust legal infrastructure in which it can operate efficiently.<sup>70</sup> Using international standards can increase the potential for cross-border interoperability. A variety of intergovernmental and international organizations, as noted earlier, are working to create international standards for the Single Window.

For the discussion in this paper, UN/CEFACT and the United Nations Commission on International Trade Law (UNCITRAL) are particularly relevant to the development of such international standards.<sup>71</sup> UN/CEFACT's Recommendation 35 provides guidance to governments on the legal issues that may arise in the creation and operation of a Single Window and should be analyzed and addressed. Issues that may be important in these efforts have been discussed earlier.

The United Nations Commission on International Trade Law (UNCITRAL) work program is highly relevant to Single Window development. UNCITRAL has developed a series of international legal texts that can provide guidance for the development of national, regional, and international Single Window facilities. In part, these instruments when enacted as part of domestic law or ratified, can provide countries with the basic underlying legal framework for the 'electronic Single Window.' Of particular value are the United Nations Electronic Communications Convention<sup>72</sup> and Model Law on Electronic Commerce.<sup>73</sup> Each of these texts presents a clear international standard and can be used in analyzing the legal infrastructure requirements for the Single Window. Finally, the new work being undertaken by the joint WCO-UNCITRAL Legal Working Group should be followed closely. The legal reference document on the Single Window that is the primary focus of this joint development effort should provide more certainty about the emerging international legal standards in the Single Window area.

<sup>&</sup>lt;sup>70</sup> See e.g., CEFACT Recommendation 33 *supra* note 1 at 4. Regarding technical standards, Recommendation 33 states,

When implementing a Single Window, governments and trade are strongly encouraged to consider the use of existing recommendations, standards and tools that have been developed over the past number of years by intergovernmental agencies and international organisations such as UNECE, UNCTAD, WCO, IMO, ICAO and the ICC.

<sup>&</sup>lt;sup>71</sup> Certainly, the work being done or proposed in other international organizations, such as the World Customs Organization, The United Nations Commission for Trade and Development, the International Maritime Organization, and others are important as well.

<sup>&</sup>lt;sup>72</sup> See supra note 16.

<sup>&</sup>lt;sup>73</sup> See supra note 17.

Finally, it may be noted that although many of the legal issues related to Single Window development tend to be matters of domestic law, the importance of international legal standards relates to the increasing need for cross-border interoperability. Many countries are anxious to see such standards developed in order to participate more fully in international trade and development. The idea that countries seek to model domestic law after international legal standards, particularly in technology areas, is not new.<sup>74</sup> This trend has been increasing in the area of electronic commerce law and for the Single Window. Many countries have only recently been working to establish the basic enabling legal frameworks in these areas and are attentive to the guidance provided by international organizations.

# V. General Conclusions

An obvious conclusion from the foregoing discussion is that legal initiatives (laws, regulations, policy-level guidance documents, etc.) are needed to support ongoing Single Window development. Domestic laws governing commercial transactions may have to be adapted for electronic transactions in many countries, and new laws and regulations may also be needed to facilitate domestic and cross-border transactions and to ensure interoperability for exchange of information between the public and private sectors in Single Window environments.

Two factors, harmonization<sup>75</sup> and interoperability will play important roles in the ultimate success of the Single Window from an international perspective. While this paper is focused primarily on the legal aspects of Single Window implementation, it should be understood that the Single Window legal framework, whether at the domestic or international levels, does not exist in a vacuum. Indeed, the specific objective is to achieve interoperability, both technically and legally, between the national Single Window facilities.

To achieve an e-enabling legal environment for the Single Window, it is important to take into account other aspects of the legal infrastructure in order to move forward in a way that will develop the right legal infrastructure for the Single Window at the beginning, one that will enhance all aspects of the Single Window and "paperless trade for the longer term.

Finally, a key point mentioned numerous times in the earlier sections of this paper is that it is important to adopt international standards in creating the Single Window so that the resulting legal infrastructure is interoperable not only domestically, but also globally. Meeting this objective will have significant benefits for developing and enhancing regional and global trade competitiveness. For example, companies doing business with businesses in other countries frequently look at the legal environment of a particular country to determine the level of risk they may have to assume if

<sup>&</sup>lt;sup>74</sup> See generally, A.H. Boss, *Electronic Commerce and the Symbiotic Relationship Between International and Domestic Law Reform*, 72 TUL. L. REV. 1931 (June 1998); see also, W. J. Luddy, Jr., *International Development of Technology-Related Law: "Toto, I've a Feeling We're Not in Kansas Anymore*", 6 THE SCITECH LAWYER, 8, (Fall 2009.)

<sup>&</sup>lt;sup>75</sup> "Harmonization" in this context is not necessarily intended to suggest "uniform" particularly in light of issues of national sovereignty.

they decide to enter business relationships in that country. Predictability and certainty, in a legal sense, are never absolute, but where uncertainty about the legal infrastructure exists, a country may not achieve an optimal outcome in trade development.