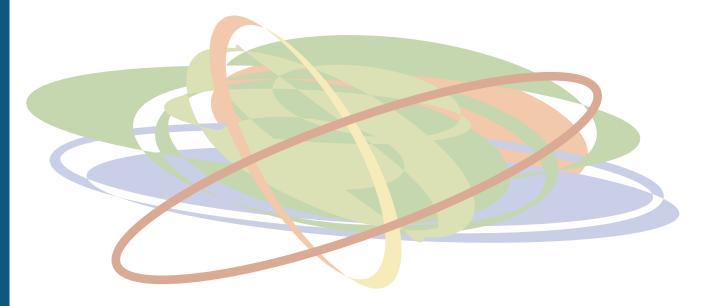# Tracker 2001

Version 2.0

TXML Specification

Tracker 2001 TXML Specification
Version 2.0

Table of Contents

Preface

Welcome to the tXML Specification! This document describes how to use tXML (tXML eXtensible Markup Language) for communication of data related to electronic export control and international trade.

This chapter contains the revision history and general document information, such as audience and document organization.

Contents:

- Revision History
- What is tXML?
- Document Organization

Revision History

Name	Date	Reason for Changes	Version
Todd Harbour	7/2000	New document	v1.0
Kathleen Yoshida	4/2001	Formatted the document in the Tracker look and feel; this version also includes the latest TXML update	v2.0

What is tXML?

tXML (commerce eXtensible Markup Language) is a type of XML designed specifically for export control transactions and international trade.

Audience

This document is intended for programmers designing tXML-enabled applications. It is oriented toward suppliers that are developing or modifying their e-commerce web sites for tXML.

tXML is an open, versatile language for the transaction requirements of:

- Electronic product catalogs
- XML catalogs
- Procurement applications
- Internal Control Programs
- National export control systems

Readers should have a working knowledge of e-commerce concepts and the http Web communication standard. This document does not describe how to use specific applications or network e-commerce hubs. Instead, it provides details describing how developers can directly communicate with tXML and national export control systems.

Document Organization

This document consists of a preface and four chapters. The table below summarizes each chapter's content.

Table 1: Chapter Contents

Read this chapter	If you're interested in this type of information
Chapter 1: Introduction to tXML	An XML introduction and a list of applications that use tXML. Also contains a section describing XML utilities.
Chapter 2: Implementing tXML	tXML requirements, XML conventions, and basic element and entity types.
Chapter 3: TXML Specification	The tXML specification.
Chapter 4: Terms and Definitions	Defitions of tXML elements used in Chapter 3.

The following bulleted list addresses specific document sections that certain types of tXML users should read:

- E-commerce Business Managers—For an overview of tXML capabilities, read Chapter 1, *Introduction to tXML*.
- Web Programmers—Web programmers who are implementing e-commerce solutions should read all chapters.

Chapter 1: Introduction to tXML

This chapter contains a tXML introdution, including capabilities, uses, and utilities.

Contents:

- tXML Capabilities
- Application Types
- XML Utilities

tXML Capabilities

tXML allows buyers, suppliers, aggregators, intermediaries, and governments to communicate using a single, standard, and open language. Successful business-to-business electronic commerce (B2B e-commerce) systems depend upon a flexible and widely adopted standard to exchange information in a timely and cost-efficient manner. tXML is key to providing the widest access to national export control systems and services, because it is a well-defined, robust language designed specifically for B2G e-commerce, and it is the choice of high volume buyers and suppliers. tXML transactions consist of documents, which are simple text files with a well-defined format and content. Most types of tXML documents are analogous to hardcopy documents traditionally used in business.

The following subsections describe the main types of tXML documents.

Types of Applications that Use tXML

tXML can be used by any e-commerce or export control application. tXML may be used by buying organizations, vertical and horizontal buying communities, suppliers, application vendors, and government authorities. The following subsections describe the main application types that currently use tXML.

Procurement Applications

These applications allow the creation of buying communities that are composed of many small- to medium-sized businesses. These applications allow communities of users to buy contract products and services from vendors approved by purchasing managers. Managers approve requested purchases and approve purchase orders are transmitted to suppliers and national authorities through several possible channels, including tXML over the Internet.

Export Licensing Applications

These applications allow the receipt and processing of export license applications from industry and other types of applicants.

Commerce Network Platforms

Commerce network platforms are Web-based services for connecting buyers and suppliers. These Web services provide features such as catalog validation and file management, catalog publishing and subscription, automated purchase order routing, and purchase order history. Communication between these Web services, buyer applications, and supplier applications can occur in coordination through tXML over the Internet.

Order Receiving Systems

Order-receiving systems are applications at supplier sites that accept and process purchase orders sent by buying organizations. Order-receiving systems can be any system, such as inventory management systems, order-fulfillment systems, or order-processing systems. Because it is simple to extract information from purchase orders, it is relatively easy to create the adapters that enable existing order-receiving systems to accept them.

Validation Against DTD

Because tXML is an XML language and a set of Document Type Definitions (DTDs) thoroughly define it. These DTDs are text files that describe the precise syntax and order of tXML elements. DTDs enable applications to validate the tXML they read or write. tXML applications are not required to validate tXML documents, although it is recommended.

Getting tXML DTDs

DTDs for all versions of tXML are available at consistent locations on tXMLnet.org:

http://water.tXMLnet.org/UserResources/Library/

Performing Validations

Applications can use the tXML DTD to validate all incoming and outgoing tXML documents. XML validation applications are available on the Web. Microsoft Internet Explorer 5 has built-in XML validation capability. For reliable transaction handling, validate all tXML documents received.

For best performance, tXML clients should not fetch DTDs each time they parse tXML documents. Instead, they should look at the tXML version in the document headers and retrieve DTDs that have not already been stored locally.

XML Utilities

Utilities for editing and validating XML files are available for free and for purchase on the Web. The following listing describes a few of these utilities:

- Internet Explorer 5 from Microsoft. An XML-aware Web browser that can validate XML files against DTDs.
- www.microsoft.com/windows/ie/default.htm
- XML Notepad from Microsoft. A simple XML editor.
- msdn.microsoft.com/xml/notepad/intro.asp
- XML Authority from Extensibility. A Java-based XML DTD editor, with hierarchical and graphical views.
- www.extensibility.com
- XML Spy from Icon Information Systems. A tool for maintaining DTDs and XML files, with a grid, source and browser view.
- www.icon-is.com
- XMetaL from Softquad Software. A customizable XML authoring tool.
- www.softquad.com
- CLIP from Techno2000 USA. An easy-to-use XML authoring tool, with guided editing.
- www.t2000-usa.com
- XMLwriter from Wattle Software. A graphical XML authoring tool designed to manage XML projects.
- www.xmlwriter.net

In addition, the following web sites list more XML tools:

- www.xmlsoftware.com
- www.xml.com/pub/pt/Editors

Chapter 2: Implementing tXML

This chapter contains information for how to use tXML, including requirements, conventions, and examples of classification schema. This chapter shows how to modify your systems to take advantage of tXML.

tXML enables users of export control, B2B, and other business applications to access export control information that resides within national governments. tXML allows industry to electronically communicate with national authorities to process export control applications and eliminates the need to coordinate via fax, mail, and other manual methods. Instead, tXML represents the fundamental definition of the information industry and governments need to be responsive and accurate.

Contents:

- tXML Requirements
- Work Estimate
- Understanding XML
- XML Conventions
- Basic Elements and Entity Types
- Classification of Managed Objects
- Examples of Classification Schema

tXML Requirements

Before making systems ready for tXML, be sure that you understand and evaluate the benefits and requirements of tXML.

Work Estimate

The following table lists estimates of work required for tXML integration based on estimates. However, the actual time and cost associated with your implementing tXML will vary depending upon the scope and complexity of each individual system:

Level of Pre-existing Infrastructure	Level of Pre-existing Infrastructure
Transactive system with XML infrastructure	3 weeks with in-house IT staff 3-4 weeks with contractors
Transactive system without XML infrastructure	4 weeks with in-house IT staff 4-5 weeks with contractors

Understanding XML

The first step to becoming tXML enabled is to understand XML. XML is a language for describing other languages. tXML documents are constructed based on XML Document Type Definitions (DTDs). Acting as templates, DTDs can be used to define content models within a tXML document (for example, the valid order and nesting of elements) and the datatypes of attributes.

To implement tXML in a particular system, you must have a fundamental understanding of how to create, parse, query, receive, and transmit XML data to and from a remote source.

The basic tools to process XML documents are XML parsers. Parsers are freely available from Microsoft and other companies (Need to emphasize open source products versus Microsoft here). For a list of XML tools, see XML Utilities on page X.

XML Conventions

tXML uses elements to describe discrete items and their properties in typical business documents. Information with obvious subdivisions and relations between those subdivisions such as an address are also described using elements. tXML makes extensive use of attributes.

In tXML, all elements and attribute names use whole words with capitals (not hyphens) separating the words. Element names begin with an uppercase letter; attribute names begin with a lowercase letter, for example:

- Elements: Sender, Credential, Payment, ItemDetail
- Attributes: version, payloadID, lineNumber, domain

Basic Elements and Entity Types

The following entities and elements are used throughout the tXML specification. Most of the definitions here are basic vocabulary with which the higher-order business documents are described. The common type entities and the common elements representing low-level objects are defined here. Most of these definitions are from the XML-Data note submission to the World Wide Web Consortium (W3C). A few higher-level type entities that are also defined here are not from XML-Data. These types are also discussed in "tXML Envelope" on page xx.

- The original XML Data proposal to the Word Wide Web Consortium (W3C), www.w3c.org/TR/1998/NOTE-XML-data-0105

Classification of Managed Objects

This section describes the how the information model supports classification of ManagedObjects. It is a simplified version of the OASIS classification model A ManagedObject may be classified in many ways. For example the ManagedObject for the same Collaboration Protocol Profile (CPP) may be classified by its industry, by the products it sells and by its geographical location.

A general classification scheme can be viewed as a classification tree. In the example shown in Figure x, ManagedObjects representing Collaboration Protocol Profiles are shown as shaded boxes. Each Collaboration Protocol Profile represents an automobile manufacturer. Each Collaboration Protocol Profile is classified by the ClassificationNode named Automotive under the root ClassificationNode named Industry. Furthermore, the US Automobile manufacturers are classified by the US ClassificationNode under the Geography ClassificationNode. Similarly, a European automobile manufacturer is classified by the Europe ClassificationNode under the Geography ClassificationNode.

The example shows how a ManagedObject may be classified by multiple classification schemes. A classification scheme is defined by a

ClassificationNode that is the root of a classification tree (e.g. Industry, Geography).

Examples of Classification Schema

The following table lists some examples of possible classification schemes enabled by the information model. These schemes are based on a subset of contextual concepts identified by the ebXML Business Process and Core Components Project Teams. This list is meant to be illustrative not prescriptive.

Classification Scheme (Context)	Usage Example
Industry	Find all Parties in Automotive industry
Process	Find a ServiceInterface that implements a Process
Product	Find a business that sells a product
Temporal	Find Supplier that can ship with 24 hours
Role	Find All Suppliers that have a role of "Seller"
Locale	Find a Supplier located in Japan

Chapter 3: tXML Specification

This chapter contains the tXML specification.

Contents:

- tXML Specification

TXML Specification

```
<?xml version="1.0" encoding="UTF-8"?>

<!ENTITY txml.version "1.0">

<!ELEMENT TXML ((Person | Organization | ProductType | Case |
ControlList | Document)*)>
<!ATTLIST TXML version CDATA "&txml.version;">


<!-- Person, Organization, ProductType and Document have OIDs that can
be> referred -->
<!-- to when it is used more than once in a single TXML file.  The first time
the  -->
<!-- object appears in the TXML file, provide all applicable info.  The next
time  -->
<!-- you need to use the object, you can provide just the OID.
-->
```

Area

```
<!-- Area -->
<!-- For more information on these units of measure codes, which are ISO
standard, -->
<!-- refer to  <http://www.unece.org/trade/facil/tfc_uom.htm> -->
<!ELEMENT Area (#PCDATA)>
<!ATTLIST Area UNIT_OF_MEASURE (a | acre | cm2 | daa | dm2 | ft2 | ha
| in2 |
km2 | m2 | mile2 | mm2 | yd2) #REQUIRED>
```

Case

```
<!-- Case -->
<!ELEMENT Case (ID, Status, License?, ReceivedDate?,
ApplicationDate?,ApplicationNumber?,Applicant?, Party*, Item*, TotalCost?,
TotalWeight?,Position*, Decision?, Condition?, Owner?,
EndUseSummary?,Document*, Comment*)>
<!ATTLIST Case TYPE (UNDEFINED | DUAL_USE | MUNITIONS |
NUCLEAR) #REQUIRED>
<!ATTLIST Case ACTIVITY_TYPE (IMPORT | EXPORT | DEEMED |
PROJECT | REEXPORT |
TRANSIT | GENERAL) #REQUIRED>
```

```
<!ELEMENT ReceivedDate (#PCDATA)>  <!-- YYYY-MM-DD -->
<!ELEMENT ApplicationDate (#PCDATA)>  <!-- YYYY-MM-DD -->
<!ELEMENT ApplicationNumber (#PCDATA)>
<!ELEMENT Applicant (Party)>
<!ELEMENT TotalCost (Money)>
<!ELEMENT TotalWeight (Mass)>
<!ELEMENT Owner (#PCDATA)>
<!ELEMENT EndUseSummary (#PCDATA)>
```

Classification

```
<!-- Classification -->
<!ELEMENT Classification (ECN, Rationale)>
<!ATTLIST Classification REGIME (UNDEFINED | AG | CWC | NSG |
MTCR | WA | EU |
ML) #REQUIRED>
<!ELEMENT ECN (#PCDATA)>
<!ELEMENT Rationale (#PCDATA)>
```

Comment

```
<!-- Comment -->
<!ELEMENT Comment (Author, Date, Text)>
<!ATTLIST Comment TYPE (TECHNICAL | EVALUATION | NOTE)
#REQUIRED>
```

Condition

```
<!-- Condition -->
<!ELEMENT Condition (Setter, Agency, Date, Comments)>
<!ATTLIST Condition TYPE (UNDEFINED | ACTIVATE | DEACTIVATE |
REMAND | REVOKE
| WITHDRAW) #REQUIRED>
<!ELEMENT Setter (#PCDATA)>
```

Contact Location

```
<!-- Contact Location -->
<!ELEMENT ContactLocation ((StreetAddress, City, State, PostalCode,
Country)?,
```

```
PhoneNumber*, FaxNumber*, Email*, Url*)>
<!ATTLIST ContactLocation TYPE (UNDEFINED | BILLING_LOCATION |
MAILING_LOCATION | RESIDENCE |
SHIPPING_LOCATION | WORKPLACE) #IMPLIED>
<!ELEMENT StreetAddress (#PCDATA)>
<!ELEMENT State (#PCDATA)>
<!ELEMENT City (#PCDATA)>
<!ELEMENT Country (#PCDATA)>
<!ELEMENT PostalCode (#PCDATA)>
<!ELEMENT PhoneNumber (#PCDATA)>
<!ELEMENT FaxNumber (#PCDATA)>
<!ELEMENT Email (#PCDATA)>
<!ELEMENT Url (#PCDATA)>
```

Control List

```
<!-- Control List -->
<!ELEMENT ControlList (#PCDATA)>
```

Decision

```
<!-- Decision -->
<!ELEMENT Decision (Maker, Agency, Date, Comments)>
<!ATTLIST Decision TYPE (UNDEFINED | APPROVE | DISAPPROVE |
APPROVE_WITH_CONDITIONS) #REQUIRED>
```

Distance

```
<!-- Distance -->
<!-- For more information on these units of measure codes, which are ISO
standard, -->
<!-- refer to  <http://www.unece.org/trade/facil/tfc_uom.htm> -->
<!ELEMENT Distance (#PCDATA)>
<!ATTLIST Distance UNIT_OF_MEASURE (A | AU | ch | cm | dam | dm |
fathom | fm
 |
ft | hm | in | km | m | mile | mm | n_mile |
nm | pc | pm | um | yd) #REQUIRED>
```

Document

```
<!-- Document -->
<!ELEMENT Document ((Name, Description?, Author?, CreationDate?,
LastModifiedDate?)?)>
<!ATTLIST Document OID CDATA #REQUIRED>
<!ATTLIST Document SRC CDATA #IMPLIED> <!-- The URL where data is
contained
-->
<!ATTLIST Document MIME_TYPE CDATA #IMPLIED>
<!ELEMENT CreationDate (#PCDATA)>
<!ELEMENT LastModifiedDate (#PCDATA)>
```

Item

```
<!-- Item -->
<!ELEMENT Item (ProductType, SerialNumber, Quantity?, UnitCost?,
EndUse*, Document*, Comment*)>
<!-- Parties in an Item may have any role except APPLICANT -->
<!ELEMENT SerialNumber (#PCDATA)>
<!ELEMENT Quantity (Area | Distance | Mass | SalesUnit | Time |
Volume)>
<!ELEMENT UnitCost (Money)>
<!ELEMENT EndUse (#PCDATA)>
```

License

```
<!-- License -->
<!ELEMENT License (LicenseNumber, IssueDate?, ExpirationDate?)>
<!ELEMENT LicenseNumber (#PCDATA)>
<!ELEMENT IssueDate (#PCDATA)>  <!-- YYYY-MM-DD -->
<!ELEMENT ExpirationDate (#PCDATA)>  <!-- YYYY-MM-DD -->
```

Mass

```
<!-- Mass -->
<!-- For more information on these units of measure codes, which are ISO
standard, -->
<!-- refer to  <http://www.unece.org/trade/facil/tfc_uom.htm> -->
<!ELEMENT Mass (#PCDATA)>
<!ATTLIST Mass UNIT_OF_MEASURE (cg | dag | dg | dt | g | hg | kg | kt
| lb |
```

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Mg | ug | mg | oz | t) #REQUIRED>

Money

```
<!-- Money -->
<!-- For more information on these currency codes, which are ISO standard, -->
<!-- refer to <http://www.unece.org/cefact/rec/cocucod.htm> -->
<!ELEMENT Money (#PCDATA)>
<!ATTLIST Money CURRENCY (AED | AFA | ALL | AMD | ANG | AON | ARP | ATS | AUD
|
AWF | AZM | BAK | BBD | BDT | BEF | BGL | BHD | BIF |
BMD | BND | BOB | BRL | BSD | BTR | BWP | BYR | BZD |
CAD | CDF | CHF | CLP | CNY | COP | CRC | CZK | CUP |
CVE | CYP | DEM | DJF | DKK | DOP | DZD | ECS | EEK |
EGP | ERN | ESP | ETB | EUR | FIM | FJD | FKP | FRF |
GBP | GEL | GHC | GIP | GMD | GNF | GRD | GTQ | GYD |
HKD | HNL | HRK | HTG | HUF | IDR | IEP | ILS | INR |
IQD | IRR | ISK | ITL | JMD | JOD | JPY | KES | KGS |
KHR | KMF | KPW | KRW | KWD | KYD | KZT | LAK | LBP |
LKR | LRD | LSL | LTL | LUF | LVL | LYD | MAD | MDL |
MGF | MKD | MMK | MNT | MOP | MRO | MTL | MUR | MVR |
MWK | MXP | MYR | MZM | NAD | NGN | NIO | NLG | NOK |
NPR | NZD | OMR | PAB | PEN | PGK | PHP | PKR | PLZ |
PTE | PYG | QAR | ROL | RUR | RWF | SAR | SBD | SBL |
SCR | SDD | SEK | SGD | SHP | SIT | SKK | SLL | SOS |
SRG | STD | SVC | SYP | SZL | THB | TJR | TMM | TND |
TOP | TRL | TTD | TWD | TZS | UAH | UGX | USD | UYU |
UZS | VEB | VND | VUV | WST | XAF | XAG | XAU | XCD |
XDR | XOF | XPD | XPF | XPT | YER | YUN | ZAR | ZMK |
ZWD) #REQUIRED>
```

Organization

```
<!-- Organization -->
<!ELEMENT Organization ((ID, Name, RegistrationID?, ContactLocation*,
WatchReport*,
Document*, Comment*, AffiliatedWith?, BoardMembers?,
BusinessPartners?, Clients?, Customers?, DoesBusinessWith?,
Employees?, Members?, SeniorExecutives?, Shareholders?,
SiblingOrganizations?, SubOrganizations?, Suppliers?,
Workers?, WorksWith?)?)>
```

<!ATTLIST Organization OID CDATA #REQUIRED>
<!ATTLIST Organization TYPE (COMMERCIAL | EDUCATIONAL | INTERNATIONAL |
LAWENFORCEMENT | LEGALGOVERNMENT | MILITARY |
NATIONAL | NONPROFIT | POLITICAL |
PROFESSIONAL | RELIGIOUS) #IMPLIED>
<!ELEMENT BoardMembers (Person+)>
<!ELEMENT Members ((Person | Organization)+)>
<!ELEMENT SeniorExecutives (Person+)>
<!ELEMENT Shareholders ((Person | Organization)+)>
<!ELEMENT SiblingOrganizations (Organization+)>
<!ELEMENT SubOrganizations (Organization+)>
<!ELEMENT Suppliers ((Person | Organization)+)>

Party

<!-- Party -->
<!ELEMENT Party (((Person | Organization), CaseLocation?, Contact?,
Document*, Comment*)?)>
<!ATTLIST Party OID CDATA #REQUIRED>
<!ATTLIST Party ROLE (IMPORTER | EXPORTER | END_USER |
CONSIGNEE | THIRD_PARTY | SHIPPER) #IMPLIED>
<!ELEMENT CaseLocation (ContactLocation)>
<!ELEMENT Contact (Person)>

Person

<!-- Person -->
<!ELEMENT Person ((ID, FirstName?, MiddleName?, LastName,
RegistrationID?,
ContactLocation*, WatchReport*, Document*, Comment*,
AffiliatedWith?, BusinessPartners?, Clients?, Customers?,
DoesBusinessWith?, Employees?, Workers?, WorksWith?)?)>
<!ATTLIST Person OID CDATA #REQUIRED>
<!ELEMENT FirstName (#PCDATA)>
<!ELEMENT MiddleName (#PCDATA)>
<!ELEMENT LastName (#PCDATA)>

Position

<!-- Position -->
<!ELEMENT Position (Maker, Agency, Date, Comments)>

```
<!ATTLIST Position TYPE (UNDEFINED | APPROVED | DENIED |
APPROVED_WITH_CONDITIONS) #REQUIRED>
```

Product Type

```
<!-- ProductType -->
<!ELEMENT ProductType ((ID, Name?, Category?, Description?, Make?,
Model?,
ManufacturerProductNumber?,
Manufacturers?, Classification*, Document*, Comment*)?)>
<!ATTLIST ProductType OID CDATA #REQUIRED>
<!ELEMENT Category (#PCDATA)>
<!ELEMENT Make (#PCDATA)>
<!ELEMENT Model (#PCDATA)>
<!ELEMENT ManufacturerProductNumber (#PCDATA)>
<!ELEMENT Manufacturers (Organization+)>
```

Sales Unit

```
<!-- SalesUnit -->
<!-- For more information on these units of measure codes, which are ISO
standard, -->
<!-- refer to  <http://www.unece.org/trade/facil/tfc_uom.htm> -->
<!ELEMENT SalesUnit (#PCDATA)>
<!ATTLIST SalesUnit UNIT_OF_MEASURE (BOXES | EACH | KITS |
PACKS | PIECES |
ROLLS |
SETS | UNITS) #REQUIRED>
```

Status

```
<!-- Status -->
<!ELEMENT Status (StatusHistory*)>
<!ATTLIST Status TYPE (CREATED | ACTIVATED | ESCALATED |
DECIDED) #REQUIRED>
```

Status History

```
<!-- StatusHistory -->
<!ELEMENT StatusHistory (Date, Status)>
```

Time

<!-- Time -->
<!-- For more information on these units of measure codes, which are ISO standard, -->
<!-- refer to <http://www.unece.org/trade/facil/tfc_uom.htm> -->
<!ELEMENT Time (#PCDATA)>
<!ATTLIST Time UNIT_OF_MEASURE (d | h | ks | min | ms | ms | s | us) #REQUIRED>

Volume

<!-- Volume -->
<!-- For more information on these units of measure codes, which are ISO standard, -->
<!-- refer to <http://www.unece.org/trade/facil/tfc_uom.htm> -->
<!ELEMENT Volume (#PCDATA)>
<!ATTLIST Volume UNIT_OF_MEASURE (cl | cm3 | dal | dl | dm3 | ft3 |
hl | in3 |
kl | l | Ml | ml | m3 | mm3 | ul | yd3) #REQUIRED>

Watch Report

<!-- WatchReport -->
<!ELEMENT WatchReport (Reason+, Description)>
<!ATTLIST WatchReport DISPOSITION (UNDEFINED | ON_WATCH |
OFF_WATCH)
<!ATTLIST WatchReport SOURCE (UNDEFINED | INTERNET |
NEWS_MEDIA |
OTHER_AGENCIES |
PRIVATE_SECTOR) #REQUIRED>
<!ATTLIST WatchReport RISK (UNDEFINED | EXTREME | HIGH |
MEDIUM | LOW | NONE)

<!ELEMENT Reason EMPTY>
<!ATTLIST Reason TYPE (APARTHEID_SUPPORTING_PARTY |
BANKRUPT_INSOLVENT_OUT_OF_BUSINESS |
CHEMICAL_BIOLOGICAL_WARFARE_CONCERN |
CONTROLLED_IN_FACT_FIRM |

CUSTOMS |
DENIED_PARTY |
DESIGNATED_NATIONAL |
DTC_DEBARRED_PARTY |
ECONOMIC_DEFENSE_LIST |
ENFORCEMENT_CONCERN_INTEREST |
ENTITIES_LIST |
INTERNATIONAL_DRUG_TRAFFICKING_CONCERN |
INTERNATIONAL_TERRORIST_SUPPORTING_ORGANIZATION |
MISSILE_TECH_CONTROL_REGIME |
NUCLEAR_PROLIFERATION |
PAST_EXPORT_CONTROL_SANCTION |
PRC_OWNED_CONTROLLED |
PRE_LICENSE_CHECK |
ROUTINE_INVESTIGATION_OBSERVATION |
SDI_TECHNOLOGY |
SOUTH_AFRICAN_FOREIGN_INVESTMENT |
SOVIET_BLOC_TRADE_BUSINESS_REPRESENTATIVE |
SUBJECT_OF_EPCI_INFORMED_LETTER |
SUBJECT_OF_MULTILATERAL_CONTROL_GROUP_DENIAL |
SUBJECT_OF_AN_NDAA_OBJECTION |
TARGETED_FIRM |
UNFAVORABLE_POST_SHIPMENT_CHECK |
UNFAVORABLE_PRE_LICENSE_CHECK) #REQUIRED>

Common Elements

```
<!-- Common Elements -->
<!ELEMENT AffiliatedWith ((Person | Organization)+)>
<!ELEMENT Agency (#PCDATA)>
<!ELEMENT Author (#PCDATA)>
<!ELEMENT BusinessPartners ((Person | Organization)+)>
<!ELEMENT Clients ((Person | Organization)+)>
<!ELEMENT Comments (#PCDATA)>
<!ELEMENT Customers ((Person | Organization)+)>
<!ELEMENT Date (#PCDATA)>
<!ELEMENT Description (#PCDATA)>
<!ELEMENT DoesBusinessWith ((Person | Organization)+)>
<!ELEMENT Employees ((Person | Organization)+)>
<!ELEMENT ID (#PCDATA)>
<!ELEMENT Name (#PCDATA)>
<!ELEMENT Maker (#PCDATA)>
<!ELEMENT RegistrationID (#PCDATA)>
<!ELEMENT Text (#PCDATA)>
<!ELEMENT Workers ((Person | Organization)+)>
```

```
<!ELEMENT WorksWith ((Person | Organization)+)>
```

Chapter 4: Terms and Definitions

This chapter describes the protocol and data formats of tXML (Tracker eXtensible Markup Language), the XML definition for global export control information. It contains all the information developers need to implement tXML as part of other systems. Both the definition and business documents that the definition creates are discussed in depth.

Additionally, examples of actual implementations illustrate and clarify the use of tXML.

Contents:

- tXML Elements

tXML Elements

Case

Refers to the basic accumulation of information in an export control activity. Case are primarily built from other first class objects including Parties, Items, Locations, and Documents.

Case TYPE

tXML presently supports the following types of Cases: (1) UNDEFINED, (2) DUAL_USE, (3) MUNITIONS, and (4) NUCLEAR

Case ACTIVITY_TYPE

tXML presently supports the following types of CaseACTIVITY_TYPE: (1) IMPORT, (2) EXPORT, (3) DEEMED, (4) PROJECT, (5) REEXPORT, (6) TRANSIT, and GENERAL.

ReceivedDate

Refers to the calendar date that a national export licensing authority receives an export license application.

ApplicationDate

Refers to the calendar date that a national export licensing authority creates an export license application.

ApplicationNumber

Refers to the unique designation that a national export licensing authority assigns to a particular export license application.

Owner

Refers to the system User who has Case management responsibilities over a particular Case.

EndUseSummary

Refers to a Case-level description of the nature of the Case. EndUseSummary provides a high-level description of how the EndUser intends to apply the goods, technologies, services, and know-how to a desired outcome state.

ControlList

Refers to a list of items under the export control jurisdiction of a national or international authority (e.g., Bureau of Export Administration, Ministry of Economy, or Wassenaar Regime). All commodities, technology or software subject to the licensing authority and are found list format.

Document

Comments can attach external files to augment first class objects. The Attachment element appears within Comments, and it contains only a reference to the external MIME part of the attachment.

Document SRC

Refers to the URL where data is contained

Document MIME_TYPE

tXML presently supports the following MIME_TYPE: (1) …

CreationDate

Refers to the calendar date on which the User created or imported the document into the system.

LastModifiedDate

Refers to the calendar date when an authorized User make content changes to the Document.

Applicant

That entity who, as the principal party in interest in the export transaction, has the power and responsibility for determining and controlling the sending of the items out of a name place.

TotalCost

Refers to the total value of the transaction in question. This is not a sum of all declared items on an export license application. Intead, it represents the value of all controlled and uncontrolled goods, technologies, services, and know-how that compose the total transaction.

TotalWeight

Refers to the combined weight of all items reference in the Case.

Classification

Refers to a mode of rule or management based on commodity jurisdictions and subscribed to by international treaty ratification.

Classification REGIME

tXML presently supports the following regimes: (1) UNDEFINED, (2) AG, (3) CWC, (4) NSG, (5) MTCR, (6) WA, and (7) EU.

ECN

Refers to a code used to designate the classification of a particular item. Codes are derived from ControlLists and may take alpha, numeric, and alpha-numeric forms.

Rationale

Refers to an explanation of controlling principles of opinion, belief, practice, or phenomena that support a tXML User recording a particular piece of information. Normally Rationale is used to support decision making.

Condition

Refers to the present state of an export control license application.

Condition TYPE

tXML presently supports the following Conditions: (1) UNDEFINED, (2) ACTIVATE, (3) DEACTIVATE, (4) REMAND, (5) REVOKE, and (6)WITHDRAW.

Comment

Information provided by tXML Users that allow amplifying or clarifying remarks to particular pieces of information like Cases, Parties, Items, Locations or other first class objects within the system.

Comment TYPE

tXML presently supports the following kinds of Comments: (1) TECHNICAL, (2) EVALUATION, and (3) NOTE.

ContactLocation

Refers to the physical and logical location of a Party within tXML.

ContactLocation TYPE

tXML presently supports the following kinds of ContactLocations: (1) StreetAddress, (2) State, (3) City, (4) Country, (5) PostalCode, (6) PhoneNumber, (7) FaxNumber, (8) Email, and (9) URL.
StreetAddress

State

Refers to a politically organized body of people usually occupying a definite territory.

City

Refers to an inhabited place of greater size, population, or importance than a town or village b : an incorporated British town usually of major size or importance having the status of an episcopal see c *capitalized* (1) : the financial district of London (2) : the influential financial interests of the British economy d : a usually large or important municipality in the U.S. governed under a charter granted by the state e : an incorporated municipal unit of the highest class in Canada.

Country

Refers to an indefinite usually extended expanse of land : 2 a : the land of a person's birth, residence, or citizenship b : a political state or nation or

PostalCode

Refers to a group of letters and figures in a postal address to assist sorting.

PhoneNumber

Refers to a number used to call a particular telephone.

FaxNumber

Refers to a number used to call a particular facsimile machine.

Email

Refers to a number used to electronically send mail a particular person.

URL

Refers to an abbreviation for Uniform Resource Locator, the addressing system used for the World Wide Web.

Decision

Refers to the final Disposition that an authority makes against a particular export license Application.

Decision TYPE

tXML presently supports the following types of Decisions: (1) UNDEFINED, (2) APPROVE, and (3) DISAPPROVE

Item

Goods, technologies, services, and know-how.

Quantity

Refers to the total number of goods declared as constituent parts of a single Item. tXML presently supports the following Units to describe Quantity: (1) Area, (2) Distance, (3) Mass, (4) SalesUnit, (4) Time, and Volume.

SerialNumber

Refers to a code that a provider or manufacturer assigns to an Item. SerialNumber may take alpha, numeric, and alpha-numeric forms

ProductType

Refers to the type of Item an Applicant wants to export.

UnitCost

Refers to the cost for a single Item in an export license Application.

EndUse

Application of goods, technologies, services, or know-how to a particular desired outcome state.

License

Permission issued by a granting governmental authority to an applicant for export, reexport, or other regulated activity.

LicenseNumber

Refers to a code used to designate particular Case once it has been approved. Codes are derived from either internally generated serialization

or lists external to the export control system. LicenseNumber may take alpha, numeric, and alpha-numeric forms.

IssueDate

Refers to the calendar date on which a national licensing authority issues an approved Case (i.e., License) to an Applicant.

ExpirationDate

Refers to the calendar date beyond which the License is no longer valid.

RegistrationID

Refers to a code that a licensing authority assigns to an Party as part of a authorization process to allow the Party to transact munitions goods as part of a sanctioned export license activity. RegistrationID may take alpha, numeric, and alpha-numeric forms

WatchReport

Is negative information related to individuals and organizations that that is used as input to the decsion making within the export control community. WatchReports may also serve as rationale for denying exports and may serve as input to more serious consequence like legal actions.

WatchReport SOURCE

tXML presently supports the following SOURCES: (1) UNDEFINED, (2) INTERNET, and NEWS_MEDIA.

WatchReport DISPOSITION

tXML presently supports the following DISPOSITION: (1) UNDEFINED, (2) ON_WATCH, and (3) OFF_WATCH.

WatchReport RISK

tXML presently supports the following RISK: (1) UNDEFINED, (2) EXTREME, (3) HIGH, (4) MEDIUM, (5) LOW, and (6) NONE.

Reason

Refers to the rationale a User provides for changing a Party's WatchReport DISPOSITON.

BoardMembers

Refers to a board of directors who in setting broad corporate goals and determining if managers are, in fact, pursuing and achieving those goals.

Members

One of the elements of a set or class

SeniorExecutives

Refers to an individual in an organization as having administrative or managerial responsibility

Shareholders

Refers to individuals or organizations as holding or owning a interest in property

SiblingOrganizations

Refers to organizations that are controlled by the same parent organization or individual.

SubOrganizations

Refers to an organization controlled or owned by another organization or individual. If a SubOrganization is wholly owned, all its stock is typically held by the parent company.

Suppliers

Refers to individuals or organizations as adding as a supplement other entities.

CaseLocation

Contact

Category

Description

Refers to a free-form description of a particular Item considered for export.

Make

Model

ManufacturerProductNumber

Refers to a code used to designate the classification of a particular Item that the Manufacturer or Maker assigns. Codes are derived from ManufacturerProductNumber and may take alpha, numeric, and alpha-numeric forms.

Manufacturers

Refers to the produces or provider of goods, technologies, services, and know-how.

SalesUnit

Refer to UnitsofMeasure for more information concerning SalesUnit.

Status

StatusHistory

Refers to information the system records as part of an internal tracking mechanism against high-level objects like Case, Party, Item, Location, and Document.

Volume

Refer to http://www.unece.org/trade/facil/tfc_uom.htm for more information related to Volume.

Reason

Refers to the particular Reason an export licensing authority assigns a Party to a WatchList.

Reason TYPE

tXML presently supports the following Reason TYPE: (1) APARTHEID_SUPPORTING_PARTY, (2) BANKRUPT_INSOLVENT_OUT_OF_BUSINESS, (3) CHEMICAL_BIOLOGICAL_WARFARE_CONCERN, (4) CONTROLLED_IN_FACT_FIRM, (5) CUSTOMS, (6) DENIED_PARTY, (7) DESIGNATED_NATIONAL, (8) DTC_DEBARRED_PARTY, (9) ECONOMIC_DEFENSE_LIST, (10) ENFORCEMENT_CONCERN_INTEREST, (11) ENTITIES_LIST, (12) INTERNATIONAL_DRUG_TRAFFICKING_CONCERN, (13) INTERNATIONAL_TERRORIST_SUPPORTING_ORGANIZATION, (14) MISSILE_TECH_CONTROL_REGIME, (15) NUCLEAR_PROLIFERATION, (16) PAST_EXPORT_CONTROL_SANCTION, (17) PRC_OWNED_CONTROLLED, (18) PRE_LICENSE_CHECK, (19(ROUTINE_INVESTIGATION_OBSERVATION, (20) SDI_TECHNOLOGY, (21) SOUTH_AFRICAN_FOREIGN_INVESTMENT, (22) SOVIET_BLOC_TRADE_BUSINESS_REPRESENTATIVE, (23) SUBJECT_OF_EPCI_INFORMED_LETTER, (24) SUBJECT_OF_MULTILATERAL_CONTROL_GROUP_DENIAL, (25) SUBJECT_OF_AN_NDAA_OBJECTION, (26) TARGETED_FIRM, (27) UNFAVORABLE_POST_SHIPMENT_CHECK, (28) and UNFAVORABLE_PRE_LICENSE_CHECK.

Author

Refers to the person or organization that writes the text of a work.

Clients

Refers to an individual or organization using the services of another individual or organization.

Customers

Refers to an individual or organization using the services of another individual or organization.

AffiliatedWith

Refers to an organization that is related to another organization through some type of control or ownership. For example, a U.S.-based company may have a foreign affiliate that handles overseas sales.

BusinessPartners

Refers to a business owned by two or more individuals or organizations who agree on the method of distribution of profits and/or losses and on the extent to which each will be liable for the debts of one another. A partnership permits pass through of income and losses directly to the owners. In this way, they are taxed at each partner's personal tax rate.

DoesBusinessWith

Refers to and organization or individual that interacts with another Party in order to derive benefit, normally in the form of money..

WorksWith

Refers to and organization or individual that interacts with another Party in an undeclared capacity.

Position

Refers to a binding opinion regarding a particular export control license that represents a particular organization.

Position TYPE

TXML presently supports the following Position TYPE: (1) UNDEFINED, (2) APPROVED, (3) DENIED, and (4) APPROVED_WITH_CONDITIONS.

Maker

Refers to the individual authorized that renders a binding opinion regarding a particular export control license for a particular organization.

Agency

Refers to an organization that provides either a Position or Decision regarding the final disposition of an export license application.

Area

Mass

Area UNIT_OF_MEASURE

Refer to ISO currency codes for additional information.

Mass UNIT_OF_MEASURE

Refer to ISO currency codes for additional information.

Money

Refer to ISO currency codes for additional information.

isoLangCode

An ISO Language Code from the ISO 639 standard.

isoCountryCode

An ISO Country Code from the ISO 3166 standard.

xmlLangCode

A language code as defined by the XML 1.0 Specification (at www.w3.org/TR/1998/REC-xml-19980210.html). In the most common case, this includes an ISO 639 Language Code and (optionally) an ISO 3166 Country Code separated by a hyphen. Unlike the full XML recommendation, IANA or private language codes should not be used in tXML. IANA and private subcodes are allowed, though they should come after a valid ISO 3166 Country Code.

The recommended tXML language code format is xx[-YY[-zzz]*]? where xx is an ISO 639 Language code, YY is an ISO 3166 Country Code and zzz is an IANA or private subcode for the language in question. Again, use of the Country Code is always recommended. By convention, the language code is lowercase and the country code is uppercase. This is not required for correct matching of the codes.

unitOfMeasure

UnitOfMeasure describes how the product is packaged or shipped. It must conform to UN/CEFACT Unit of Measure Common Codes. For a list of UN/CEFACT codes, see www.unece.org/cefact.

For details about the transfer of attached files, see "Attachment Transmission" on page xx.

Attachment contains a single URL with scheme "cid:". An attached file in a tXML document might appear as:

Telephone Number

A simple reusable entity class that defines attributes of a telephone number.

PersonName

A simple entity class for a person's name.

Contact

Contact is a simple reusable entity class that defines attributes of a contact person.

Organization

Organization instances are ManagedObjects that provide information on organizations such as a Submitting Organization. Each Organization instance may have a reference to a parent Organization.

Organization TYPE

tXML presently supports the following Organization TYPE: (1) COMMERCIAL, (2) EDUCATIONAL, (3) INTER-NATIONAL, (5) LAWENFORCEMENT, (6) LEGALGOVERNMENT, (7) MILITARY, (8)

NATIONAL, (9) NONPROFIT, (1) POLITICAL, (11) PROFESSIONAL, and (12) RELIGIOUS.

Comments

Arbitrary human-readable information buyers can send within purchase orders. This string data is not intended for the automated systems at supplier sites. The Comments element can contain an Attachment element for including external files.

Time and other Data Types

The timestamp attribute (and all other dates and times in cXML) must be formatted in the restricted subset of ISO 8601 described in the Word Wide Web Consortium (W3C) Note entitled "Date and Time Formats" available at www.w3.org/TR/NOTE-datetime-970915.html.

Timestamps require a minimum of a complete date plus hours, minutes and seconds. Fractions of a second are optional. This protocol requires times expressed in local time with a time-zone offset from UTC (Coordinated Universal Time, also known as Greenwich Mean Time). The "Z" time zone designator is not allowed.

For example, 2000-04-14T013:36:00-08:00 corresponds to April 14, 2000, 1:36 p.m., U.S. Pacific Standard Time. Further references for the date, time, and other data type formats used by cXML are:
Microsoft's XML Data Types Reference site, msdn.microsoft.com/xml/ reference/schema/datatypes.asp