Common Information Sharing Standard
for
Information Security Marking: XML Implementation

Implementation Guide

Office of the Director of National Intelligence
Chief Information Officer

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Preface

This Implementation Guide is part of the documentation set for the Common Information Sharing Standard (CISS) for Information Security Marking (ISM). The other part of the set is a Data Element Dictionary (Appendix B, reference 3).

This guide serves to instruct managers and developers on the processes and methods required to adhere to this standard in the collaborative and collateral shared spaces defined by the IC System for Information Sharing (ICSIS), and on implementing and extending this standard to meet organization-specific needs.

CISS ISM is an implementation of the World Wide Web Consortium (W3C) specification of the Extensible Markup Language (XML) (Appendix B, reference 5). It consists of a set of XML attributes that may be used to associate security-related metadata with XML elements in documents, web-service transactions, or data streams. It is distributed as both an XML entity set and W3C XML Schema (WXS) so that the XML attributes defined in the standard can be incorporated into any XML document type definition (DTD) or schema. Made available along with the CISS ISM entity set and WXS are controlled vocabularies of terms that are used as the sources for the values of the CISS ISM attributes.

The first section of this Implementation Guide is an introduction that addresses applicability and the target audience. The second section is a description of the XML components that constitute the CISS ISM entity set and WXS. The third section explains how to include the CISS ISM entities or attribute groups in XML DTDs or schemas accordingly, and how to extend the entity set and WXS to support local requirements. Section 4 contains illustrations of graphical user interfaces as the preferred method of specifying values for the CISS ISM attributes. Section 5 explains how to use the attributes to create portion marks, security banners and classification/declassification blocks. Section 6 explains the controlled vocabularies from which the values for the CISS ISM attributes are drawn. Section 7 describes each CISS ISM attribute in detail, including permissible values, usage examples and notes.

CISS ISM is a product of the Intelligence Community Metadata Working Group (IC MWG), an activity of the Office of the Director of National Intelligence Chief Information Officer (ODNI CIO) with oversight by the ODNI CIO Executive Council. The development work that resulted in CISS ISM was performed by a panel under the IC MWG.

Comments and suggestions pertaining to this Implementation Guide should be sent by email to the IC MWG Secretariat listed in Appendix A.

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1 Introduction

1.1 What This Publication Is All About

This Implementation Guide explains how to use the Common Information Sharing Standard for Information Security Marking (CISS ISM) standard to apply classification and controls tokens to Extensible Markup Language (XML) documents and data streams. The CISS ISM consists of a vocabulary of agreed-upon XML attributes that were developed by a panel of the Intelligence Community Metadata Working Group (IC MWG) to support the Controlled Access Program Coordination Office (CAPCO) guidelines for security markings (Appendix B, reference 2). This guide will help organizations tag XML data in such a way that CAPCO-compliant security markings can be generated using standardized transformations and formatting.

This guide should be used in conjunction with the CISS ISM Data Element Dictionary (DED), Version 1.0 (Appendix B, reference 3). The DED contains definitions of all of the CISS ISM attributes.

1.2 Applicability

This guide applies to intelligence documents or serialized data streams created in XML format for interchange within the national security community. The intent is to provide a common set of classification and controls XML attributes that may be associated with any XML data elements and used for categorization and selection as well as formatting of portion marks, security banners and classification/declassification blocks.

CISS ISM is *not* intended to address business rules associated with using security metadata, and is therefore not a replacement for CAPCO requirements or the understanding of those requirements. Users of CISS ISM may develop specific (but separate) programming interfaces to implement their required business rules for populating and using the CISS ISM attributes.

The IC MWG developed CISS ISM as part of the ODNI CIO Executive Council commitment to inter-organization interoperability. CISS ISM is based on a number of data modeling activities that have occurred in the national security community over the last several years.

1.3 The Target Audience

This Implementation Guide is intended for use by developers and IT support personnel—not analysts and other users. The guide provides implementation details that should be transparent to authors, editors and reviewers.

Users of this guide are expected to have at least basic knowledge of XML. The guide has been written with the assumption that readers understand XML syntax (angle brackets, names, name tokens, unique identifiers, elements, attributes, *et al.*), XML namespaces, and—to a very limited degree—XML document type definitions (DTDs) and W3C XML Schemas (WXS). The references for these W3C specifications can be found in Appendix B.

1.4 Where to Submit Questions and Comments

The point of contact for this Implementation Guide is listed in Appendix A.

2 CISS ISM Components

CISS ISM defines 18 XML global attributes and a set of controlled vocabularies from which the values of certain attributes may be selected.

2.1 The Attributes

The global attributes defined by CISS ISM are to be used to associate CAPCO-defined classification and control marking abbreviation components with XML elements in documents or data streams. The names of the 18 attributes are:

1. **classification**
2. **ownerProducer**
3. **SCIcontrols**
4. **SARIdentifier**
5. **FGIsourceOpen**
6. **FGIsourceProtected**
7. **disseminationControls**
8. **releasableTo**
9. **nonICmarkings**
10. **classifiedBy**
11. **classificationReason**
12. **derivedFrom**
13. **declassDate**
14. **declassException**
15. **declassEvent**
16. **typeOfExemptedSource**
17. **dateOfExemptedSource**
18. **declassManualReview**

The attribute names follow the naming guidelines promulgated by the Federal XML Developer's Guide. Lower camel case is used except when an acronym is part of the name. Acronyms are all upper case.

The formal ISO 11179-style definitions of the attributes may be found in the CISS ISM DED.

2.2 How the Attributes are Packaged

The CISS ISM attributes are provided as an XML entity set for DTDs, which is available from the IC XML Registry as an XML schema document with the name "CISS_ISM_Entities". The entity set may be downloaded from the IC MWG web sites as well. The file name for the entity set is "CISS-ISM-v1.ent".

The CISS ISM attributes are also provided as a W3C XML schema (WXS), which is available from the IC XML Registry as an XML schema document with the name "CISS_ISM_WXS". The WXS may be downloaded from the IC MWG web sites as well. The file name is "CISS-ISM-v1.xsd".

The DTD entity set consists of two XML parameter entity declarations that declare entities named:

- %SecurityAttributes
- %SecurityAttributesOption

The entity text of these entities contains the definitions of the 18 CISS ISM attributes. References to these entities may be inserted into an XML attribute definition list in order to include the names, declared values, and default values of the CISS ISM attributes into the attribute definition list of any XML element.

The WXS version consists of declarations for two attribute groups and the 18 CISS ISM global attributes. The attribute groups, which are equivalent to the DTD parameter entities, are named:

- SecurityAttributesGroup
- SecurityAttributesOptionGroup

References to these attribute groups may be inserted into a complex type definition in order to include the names, declared values, and default values of the CISS ISM attributes into the attribute list of any XML element.

As illustrated by the following figure, a reference to entity "%SecurityAttributes" will create an attribute definition list in a DTD in which **classification** and **ownerProducer** are REQUIRED and the other attributes are IMPLIED (*i.e.*, optional).

```
<!ENTITY % SecurityAttributes
      ″classification   (U | C | S | TS | R
                         NU | NR | NC | NS | NS-S | NS-A |
                         CTS | CTS-B | CTS-BALK |
                         CTSA | NSAT | NCA)
                                                   #REQUIRED
       ownerProducer              NMTOKENS         #REQUIRED
       SCIcontrols                NMTOKENS         #IMPLIED
       SARIdentifier              NMTOKENS         #IMPLIED
       FGIsourceOpen              NMTOKENS         #IMPLIED
       FGIsourceProtected         NMTOKENS         #IMPLIED
       disseminationControls      NMTOKENS         #IMPLIED
       releasableTo               NMTOKENS         #IMPLIED
       nonICmarkings              NMTOKENS         #IMPLIED
       classifiedBy               CDATA            #IMPLIED
       classificationReason       CDATA            #IMPLIED
       derivedFrom                CDATA            #IMPLIED
       declassDate                NMTOKEN          #IMPLIED
       declassException           NMTOKENS         #IMPLIED
       declassEvent               CDATA            #IMPLIED
       typeOfExemptedSource       NMTOKENS         #IMPLIED
       dateOfExemptedSource       NMTOKEN          #IMPLIED
       declassManualReview        (true | false)   #IMPLIED”>
```

Figure 1. Entity "%SecurityAttributes"

In the WXS syntax, the same effect is accomplished by placing a reference to attribute group "SecurityAttributesGroup" in the type definition for the applicable element. The definition of "SecurityAttributesGroup" is:

```
<xsd:attributeGroup name=”SecurityAttributesGroup”>
   <xsd:attribute ref=”classification” use=”required”/>
   <xsd:attribute ref=”ownerProducer” use=”required”/>
   <xsd:attribute ref=”SCIcontrols” use=”optional”/>
   <xsd:attribute ref=”SARIdentifier” use=”optional”/>
   <xsd:attribute ref=”FGIsourceOpen” use=”optional”/>
   <xsd:attribute ref=”FGIsourceProtected” use=”optional”/>
   <xsd:attribute ref=”disseminationControls” use=”optional”/>
   <xsd:attribute ref=”releasableTo” use=”optional”/>
   <xsd:attribute ref=”nonICmarkings” use=”optional”/>
   <xsd:attribute ref=”classifiedBy” use=”optional”/>
   <xsd:attribute ref=”classificationReason” use=”optional”/>
   <xsd:attribute ref=”derivedFrom” use=”optional”/>
   <xsd:attribute ref=”declassDate” use=”optional”/>
   <xsd:attribute ref=”declassException” use=”optional”/>
   <xsd:attribute ref=”declassEvent” use=”optional”/>
   <xsd:attribute ref=”typeOfExemptedSource” use=”optional”/>
   <xsd:attribute ref=”dateOfExemptedSource” use=”optional”/>
   <xsd:attribute ref=”declassManualReview” use=”optional”/>
</xsd:attributeGroup>
```

Figure 2. Attribute Group “SecurityAttributesGroup”

Entity “%SecurityAttributes” and attribute group “SecurityAttributesGroup” are meant to be used with any XML element for which classification metadata is *required*.

The replacement text of entity “%SecurityAttributesOption” (Figure 3) is nearly identical to that of entity “%SecurityAttributes” (Figure 1). It differs only in that the default values of **classification** and **ownerProducer** are IMPLIED rather than REQUIRED.

```
<!ENTITY % SecurityAttributesOption
      ”classification   (U | C | S | TS | R
                         NU | NR | NC | NS | NS-S | NS-A |
                         CTS | CTS-B | CTS-BALK |
                         CTSA | NSAT | NCA)
                                                   #IMPLIED
       ownerProducer               NMTOKENS        #IMPLIED
       SCIcontrols                 NMTOKENS        #IMPLIED
       SARIdentifier               NMTOKENS        #IMPLIED
       FGIsourceOpen               NMTOKENS        #IMPLIED
       FGIsourceProtected          NMTOKENS        #IMPLIED
       disseminationControls       NMTOKENS        #IMPLIED
       releasableTo                NMTOKENS        #IMPLIED
       nonICmarkings               NMTOKENS        #IMPLIED
       classifiedBy                CDATA           #IMPLIED
       classificationReason        CDATA           #IMPLIED
       derivedFrom                 CDATA           #IMPLIED
       declassDate                 NMTOKEN         #IMPLIED
       declassException            NMTOKENS        #IMPLIED
       declassEvent                CDATA           #IMPLIED
       typeOfExemptedSource        NMTOKENS        #IMPLIED
       dateOfExemptedSource        NMTOKEN         #IMPLIED
       declassManualReview         (true | false)  #IMPLIED”>
```

Figure 3. Entity “%SecurityAttributesOption”

The corresponding WXS syntax is:

```
<xsd:attributeGroup name=”SecurityAttributesOptionGroup”>
   <xsd:attribute ref=”classification” use=”optional”/>
   <xsd:attribute ref=”ownerProducer” use=”optional”/>
   <xsd:attribute ref=”SCIcontrols” use=”optional”/>
   <xsd:attribute ref=”SARIdentifier” use=”optional”/>
   <xsd:attribute ref=”FGIsourceOpen” use=”optional”/>
   <xsd:attribute ref=”FGIsourceProtected” use=”optional”/>
   <xsd:attribute ref=”disseminationControls” use=”optional”/>
   <xsd:attribute ref=”releasableTo” use=”optional”/>
   <xsd:attribute ref=”nonICmarkings” use=”optional”/>
   <xsd:attribute ref=”classifiedBy” use=”optional”/>
   <xsd:attribute ref=”classificationReason” use=”optional”/>
   <xsd:attribute ref=”derivedFrom” use=”optional"/>
   <xsd:attribute ref=”declassDate” use=”optional”/>
   <xsd:attribute ref=”declassException” use=”optional”/>
   <xsd:attribute ref=”declassEvent” use=”optional”/>
   <xsd:attribute ref=”typeOfExemptedSource” use=”optional”/>
   <xsd:attribute ref=”dateOfExemptedSource” use=”optional”/>
   <xsd:attribute ref=”declassManualReview” use=”optional”/>
</xsd:attributeGroup>
```

Figure 4. Attribute Group “SecurityAttributesOptionGroup”

Entity “%SecurityAttributesOption” and attribute group “SecurityAttributesOptionGroup” are meant to be used with any XML element for which classification metadata may not *always* be required. Examples might be list items within parent lists or paragraphs, for which the classification and controls are set at the level of the parent element. However, even though the **classification** and **ownerProducer** attributes are declared to be optional, if one is used they both must be used whenever security attributes are specified for an element.

With respect to validation of the attributes as they appear in instance documents, the DTD and the WXS are functionally equivalent—with one important exception: the WXS has an associated XML namespace. For more on this, see section 3.3, below.

2.3 The Controlled Vocabularies

CAPCO is the authority for the development and use of the classification marking system for the national security community. This system employs a uniform list of security classification and control markings authorized for all dissemination of classified (and unclassified) information, including hard-copy and electronic documents, by components of the national security community. The IC MWG has developed a set of controlled vocabularies consisting of valid XML name tokens which are associated with the various general categories of security classification and control markings. The name tokens used in the controlled vocabularies that populate the CISS ISM attribute values are based on the authorized portion marking abbreviations specified in the CAPCO Authorized Classification and Control Markings Register (Appendix B, reference 1). In most cases, a name token used in a controlled vocabulary is identical to the actual CAPCO authorized portion marking abbreviation. In those few cases in which a CAPCO abbreviation does not meet the syntax requirements of an XML name token, this standard uses a substitute for the abbreviation. A controlled vocabulary may be contained either within an enumerated list internal to the declaration of an attribute, or within an external document.

An internal enumerated list is used for attribute **classification**. In DTD syntax this list is called a name token group; in the WXS syntax it is a set of enumerations of type name token. The list is built into the declaration of the attribute as its declared value. The list provides choices to be used for the attribute value. In the DTD syntax, the name token group is:

```
(U | C | S | TS | R | NU | NR | NC | NS | NS-S | NS-A |
 CTS | CTS-B | CTS-BALK | CTSA | NSAT | NCA)
```

This list is identical to the US and non-US classification portion marking abbreviations in the CAPCO Register.

In the WXS syntax, the set of enumerations looks like this:

```
<xsd:restriction base=”xsd:NMTOKEN”>
   <xsd:enumeration value=”U”/>
   <xsd:enumeration value=”C”/>
   <xsd:enumeration value=”S”/>
   <xsd:enumeration value=”TS”/>
   <xsd:enumeration value=”R”/>
   <xsd:enumeration value=”NU”/>
   <xsd:enumeration value=”NR”/>
   <xsd:enumeration value=”NC”/>
   <xsd:enumeration value=”NS”/>
   <xsd:enumeration value=”NS-S”/>
   <xsd:enumeration value=”NS-A”/>
   <xsd:enumeration value=”CTS”/>
   <xsd:enumeration value=”CTS-B”/>
   <xsd:enumeration value=”CTS-BALK”/>
   <xsd:enumeration value=”CTSA”/>
   <xsd:enumeration value=”NSAT”/>
   <xsd:enumeration value=”NCA”/>
</xsd:restriction>
```

Attribute **declassManualReview** also uses an internal name token group in the DTD syntax. That group is:

```
(true | false)
```

In the WXS syntax, **declassManualReview** is declared to have the built-in data type “boolean” which, by definition, means that the permissible values are “true” and “false”.

The CISS ISM DTD and WXS do not include enumerated lists for the other attributes. The permissible values for those attributes are more subject to change and, consequently, users are expected to refer to authoritative sources for those lists.

In order to support implementation of CISS ISM, however, several controlled vocabularies have been created and registered in the IC XML Registry as “domain value sets”. Usage of the domain value sets is described and illustrated in section 6, below. As a sample, one of the domain value sets (for “INTnonICmarkings2004-04-30”) is listed in Appendix D. In section 7, where applicable, the domain value set for an attribute is identified.

2.4 Specifying Attribute Values

For attributes **classification** and **declassManualReview**, the value must be one of the name tokens in their internal controlled vocabularies. For example, to associate a classification with an XML element named **Figure** that contains confidential information, use a start tag like this:

```
<Figure classification=”C” ... >
```

For attributes **classifiedBy**, **classificationReason**, **derivedFrom** and **declassEvent**, the declared values are character data (“CDATA”) in the attribute definition list in the DTD entity set, as shown in Figure 1 and Figure 3. These same attributes are declared to be of built-in data type “string” in the WXS. Therefore, the value for any of these attributes is simply a literal text string which may contain alphanumeric characters, spaces, symbols and other legal XML characters.

However, this is not to say that the format and content of a value can not be further restricted through configuration of authoring software by implementing organizations. In fact, it will at times even be necessary to restrict an attribute value in this way in order to comply with CAPCO guidelines. For example:

```
<Security ... derivedFrom=”Multiple Sources”/>
```

Although the declared value of **derivedFrom** is just a text string, that string must be restricted to one of several forms: it may specify the title and date of a classification guide, the title and date of a source document, or the literal string “Multiple Sources”. This can only be enforced through software configuration.

The definitions of attributes **declassDate** and **dateOfExemptedSource** differ in the DTD version from the WXS version. In the DTD version, these attributes are declared to be of type “NMTOKEN”. This means that the value may consist only of the alphanumeric characters and the special characters: hyphen (“-”), underscore (“_”), period (“.”), and colon (“:”). It is intended that the value be an ISO 8601-compliant date, such as “2004-04-30”. Since this date format conforms to the syntax of a name token, a parser can perform at least a rudimentary check that the value is of an appropriate type.

In the WXS version, we take advantage of the built-in data type named “date”. This data type constrains the attribute values to the form “YYYY-MM-DD”.

For each of the other attributes the declared value is “NMTOKENS” (short for “name token list”). This means three things:

1. An attribute value may be a single name token or it may be a space-delimited list of name tokens, where each name token is taken from the associated external controlled vocabulary.
2. Each name token must conform to the syntax of an XML name token: that is it may consist only of the alphanumeric characters and the special characters: hyphen (“-”), underscore (“_”), period (“.”), and colon (“:”).
3. The attribute values are case sensitive. For example, “SI” and “si” are not equivalent.

The reason that these attributes are declared to be of type “NMTOKENS” is that multiple controls may apply to the corresponding information for the category of control marking associated with the attribute.

Take these two examples:

```
<Para classification=”TS” ... SCIcontrols=”SI”>              (a)

<Para classification=”TS” ... SCIcontrols=”SI TK”>           (b)
```

In example (a) the **SCIcontrols** attribute contains a single value, “SI”. In example (b), however, the **SCIcontrols** attribute contains two independent values, “SI” and “TK”. The embedded space between the name tokens is only a delimiter. We know this because the declared value of **SCIcontrols** is “NMTOKENS”. Note also that, since all of the values in these examples consist of just alphabetic characters, they conform to the syntax of a name token.

Here is another example in which the **releasableTo** attribute value is a space-delimited list of four name tokens:

```
<Para classification=”S” ... disseminationControls=”REL”
 releasableTo=”USA AUS CAN GBR”>
```

It should be pointed out that the values in the CISS ISM controlled vocabularies have been chosen so as to be valid XML name tokens. In the great majority of cases, the authorized portion marking abbreviations in the CAPCO Register already are valid name tokens. However, in a few cases, modified versions of the authorized portion marking abbreviations are used in the controlled vocabularies because the abbreviations, as they appear in the CAPCO Register, do not qualify as valid XML name tokens. For example, for the dissemination control “RESTRICTED DATA-SIGMA 1” marking title, the CAPCO authorized portion marking abbreviation is “RD-SG 1.” The space between “SG” and “1” would not be permissible in an XML name token. Therefore, for CISS ISM, “RD-SG-1” is used in the corresponding controlled vocabulary. It is up to XSLT stylesheets to transform the name tokens appropriately to generate the correct security markings.

2.5 Attributes with Dependent or Conditional Relationships

Numerous, and perhaps sometimes obvious, dependent or conditional relationships do exist between attributes, between attributes with certain values, between individual space-delimited name tokens within an attribute value, or between attributes and elements.

A few examples are:

1. Attributes **classification** and **ownerProducer** must be used together. Both are required in order to specify whether a document is a US document, a non-US document, or a joint document. (See sections 7.1 and 7.14, below.)
2. When (and only when) **typeOfExemptedSource** is used, **dateOfExemptedSource** must also be used. (See sections 7.18 and 7.4, below.)
3. When (and only when) **disseminationControls** contains the “REL” or “EYES” values, **releasableTo** must also be used. (See sections 7.10 and 7.15, below.)
4. Individual values within certain multi-valued attributes should be listed in a specific order. For example, the “USA” value (ISO 3166-1 country code trigraph) should always be listed first in the value of the **releasableTo** attribute. (See section 7.15, below)
5. Many—in fact half—of the CISS ISM attributes are meaningful primarily at the product level to provide the values for the classification/declassification block and the declassification parameter of the banners. These should be used as attributes of a portion-level element only when the intent is that the portion will be re-used.

These relationships are rooted in the “business rules” resulting from compliance to CAPCO classification and control marking guidelines, other relevant governances like Executive Order 12958 and ISOO Directive 1, and IC MWG guidelines.

An XML parser program will not, and cannot, enforce these business rules. Nor should XSLT stylesheets be expected to account for incorrect or inappropriate application of attributes or attribute values within XML documents. Business rules like these must be enforced through software configuration as part of the process of applying security marking metadata to XML documents within the digital production authoring environment, or other applications that create XML data streams. One approach by which implementing organizations can enforce business rules is briefly introduced in section 4.

2.6 Attributes with Specific Rules

The **FGIsourceProtected** attribute has a dual purpose. Within ICSIS shared spaces, the attribute serves only to indicate the presence of information which is categorized as foreign government information according to CAPCO guidelines for which the source(s) of the information is concealed. Within ICSIS shared spaces, this attribute’s value will always be “FGI”. The attribute may also be employed in this manner within protected internal organizational spaces. However, within protected internal organizational spaces this attribute may alternatively be used to maintain a formal record of the foreign country or countries and/or registered international organization(s) that are the non-disclosable owner(s) and/or producer(s) of information which is categorized as foreign government information according to CAPCO guidelines for which the source(s) of the information must be concealed when the resource is disseminated to ICSIS shared spaces. If the attribute is employed in this manner, then additional measures must be taken prior to dissemination of the resource in any form to ICSIS shared spaces so that the non-disclosable owner(s) and/or producer(s) of foreign government information within the resource will be concealed.

Due to the similarity in function of attributes **FGIsourceProtected** and **ownerProducer** at the portion level, if attribute **FGIsourceProtected** is being employed in the manner described above, to maintain a formal record of protected FGI sources within protected internal organizational spaces, attribute **ownerProducer** may also potentially contain metadata concerning protected FGI sources. Therefore, similar additional measures must be taken with respect to attribute **ownerProducer** prior to dissemination of the resource in any form to ICSIS shared spaces so that the non-disclosable owner(s) and/or producer(s) of foreign government information within the resource will be concealed.

3 Guidelines for Interoperability

The CISS ISM DTD entity set and WXS are available from both the IC MWG web sites and the IC XML Registry. On the web sites, the entity set is in a file named “CISS-ISM-v1.ent” and the WXS is in a file named “CISS-ISM-v1.xsd”. In the IC XML Registry, the resource names are “CISS_ISM_Entities” and “CISS_ISM_WXS”. They are resources of type “XML Schema Document” in the “INT” registry namespace.

3.1 Integrating the CISS ISM Entity Set

The CISS ISM DTD entity set may be included by reference in any XML DTD. This requires adding an entity declaration and an entity reference to the DTD. First, declare a parameter entity for the CISS ISM entity set file. In the following example, a parameter entity named “CISS-Security-Entities” is declared. The replacement text of the entity, “CISS-ISM-v1.ent”, is a uniform resource locator (URL) for the entity set file.

```
<!ENTITY % CISS-Security-Entities  SYSTEM “CISS-ISM-v1.ent”>
```

Next, place a parameter-entity reference in the DTD at the point at which the CISS ISM entity set should be included. The following example shows a parameter-entity reference. When an XML parser encounters this reference, it will retrieve the file “CISS-ISM-v1.ent” and read it as if it were part of the parent DTD at the location of the reference.

```
%CISS-Security-Entities;
```

Because the CISS ISM DTD entity set is itself a set of parameter entity declarations, it should be included near the beginning of a DTD, before any references to the CISS ISM entities are used.

Once the CISS ISM entity set has been included, the CISS ISM parameter entities may be referenced in the attribute definition list of any element. The next example shows the element declaration and attribute definition list declaration for a hypothetical element named **Target**:

```
<!ELEMENT Target       (#PCDATA) >
<!ATTLIST Target
          BEnumber     CDATA   #REQUIRED
          Osuffix      CDATA   #IMPLIED
          categoryCode CDATA   #IMPLIED
          %SecurityAttributes;    >
```

The attribute definition list of **Target** includes—in addition to attributes named **BEnumber**, **Osuffix** and **categoryCode**—all of the CISS ISM attributes.

3.2 Integrating the CISS ISM W3C XML Schema

The CISS ISM W3C XML Schema may be included by reference in any XML schema. This requires declaring the CISS ISM version 1 namespace, and inserting an “import” statement into the schema. First, declare the namespace for the CISS ISM WXS file. In the following example, a namespace prefix, “ism”, is declared for the CISS ISM XML namespace.

```
<xsd:schema
   xmlns:xsd=”http://www.w3.org/2001/XMLSchema”
   xmlns:xlink=”http://www.w3.org/1999/xlink”
   xmlns:ism=”urn:us:gov:ic:ism”>
```

Next, insert an “import” statement into the schema at the point at which the CISS ISM WXS should be included. The following example shows an “import” statement that tells an XML parser to import schema declarations applicable to the “urn:us:gov:ic:ism” namespace from the URL prescribed by the **schemaLocation** attribute.

```
<xsd:import
   namespace=”urn:us:gov:ic:ism”
   schemaLocation=”CISS-ISM-v1.xsd”/>
```

Once the CISS ISM WXS has been included, the CISS ISM attributes may be referenced in the attribute list of any element. The next example shows the declarations for the example **Target** element in the WXS syntax:

```
<xsd:element name=”Target”>
   <xsd:complexType>
      <xsd:simpleContent>
         <xsd:extension base=”xsd:string”>
            <xsd:attribute name=”BEnumber” type=”xsd:string”
               use=”required”/>
            <xsd:attribute name=”Osuffix” type=”xsd:string”
               use=”optional”/>
            <xsd:attribute name=”categoryCode”
               type=”xsd:string” use=”optional”/>
            <xsd:attributeGroup
               ref=”ism:SecurityAttributesGroup”/>
         </xsd:extension>
      </xsd:simpleContent>
   </xsd:complexType>
</xsd:element>
```

3.3 Namespaces

As shown above, the WXS version of CISS ISM declares an XML namespace for the schema. The name of that namespace is “urn:us:gov:ic:ism”. The purpose of declaring such a namespace is to facilitate importation of the CISS ISM schema into another schema without having to be concerned about conflicts between distinct attribute types that have the same name. For example, the CISS ISM attribute **classification** can be used within another schema even when the other schema also declares an attribute named **classification**.

In instance documents, the name of an attribute is considered to include the namespace name. Consequently, the full name of **classification** becomes “urn:us:gov:ic:ism:classification”. In order to avoid unwieldy names, prefixes are used in place of namespace names. In the example of element **Target** in the preceding section, the prefix that was assigned to the CISS ISM namespace name was “ism”. In a document that is to be validated against a WXS, the element would be used like this:

```
<Target ism:classification=”U”
        ism:ownerProducer=”USA”
        BEnumber=”1234DD5678”
        Osuffix=”DD123”
        categoryCode=”1234”>ammunition plant</Target>
```

Since DTD syntax predated the advent of XML namespaces, DTD parsers do not interpret namespace names or prefixes. Consequently, the current version of the CISS ISM DTD entity set does not make use of namespaces. When DTDs are being used to validate an XML document, the target example would be written like this:

```
<Target classification=”U”
        ownerProducer=”USA”
        BEnumber=”1234DD5678”
        Osuffix=”DD123”
        categoryCode=”1234”>ammunition plant</Target>
```

In DTD usage, it is the responsibility of the organization that develops the parent DTD to be sure that none of the attributes defined for an element conflict with the CISS ISM attributes that will be used with that element.

In this document, most of the examples were originally created with DTD implementations in mind. Consequently, the examples do not show namespace prefixes.

3.4 XML Registry

XML registries are a vital component in the implementation of shared data exchanges. Developers looking to express information using XML need support in establishing common lexicons and grammars. A registry should be the reference point for obtaining the latest DTDs, schemas, controlled vocabularies, templates and sample documents. Currently, the IC XML Registry (http://diides.ncr.disa.mil/xmlreg/user/index.cfm) contains the latest CISS ISM components and documentation.

Implementing organizations are encouraged to register any extensions to the CISS ISM DTD entity set and schema so that developers may avoid repeating efforts underway at other agencies, reduce overall development efforts, and ensure compatibility.

3.5 Customizing the CISS ISM DTD Entity Set or WXS for Internal Use

CISS ISM has been specifically designed to allow for extensions. Changes to the standard may be necessary to support internal requirements of a specific agency or community of interest. Any extensions or changes made to the standard should be maintained as a separate, organizational representation.

Organizations may extend the CISS ISM entity set and schema *for internal use only*. The goal of such extensibility of security metadata is to meet each organization’s internal or bilateral requirements, while maintaining a common set of security metadata to allow sharing of information throughout the IC.

3.5.1 Extending or Restricting the Attributes

The extensible nature of XML allows CISS ISM to be customized for additional attributes. In this way, agency-specific attributes may be incorporated into a document model. This is best accomplished through the use of locally declared parameter entities in an agency-specific DTD, or locally declared attributes or attribute groups in an agency-specific schema. The agency-specific DTD or schema, sometimes called a driver DTD or driver schema, would define all agency-specific extensions and call in all external modules including the CISS ISM Entity Set or CISS ISM WXS. This method keeps the CISS ISM Entity Set and CISS ISM WXS free from internal modification. Later, if the CISS ISM Entity Set and CISS ISM WXS are revised, the new versions can replace the older versions without impacting local modifications.

In the following example, part (a) illustrates how an organization can declare a local parameter entity that has, as its replacement text, the parameters for two attribute declarations—one named **localMarkings** and the other named **FDO**. Part (b) illustrates how the locally-defined entity can be referenced as part of an element’s attribute definition list to associate the two local attributes, along with the CISS ISM security attributes, with an element named **Para**. Part (c) shows the element and attribute definition list declarations with the replacement text substituted for the parameter entity references.

```
<!ENTITY % LocalSecurityAttributes                           (a)
           ”localMarkings NMTOKENS #IMPLIED
            FDO           CDATA    #IMPLIED” >

-----------------------------------------------------------------

<!ELEMENT Para      (#PCDATA) >                              (b)
<!ATTLIST Para
          %SecurityAttributes;
          %LocalSecurityAttributes; >

-----------------------------------------------------------------

<!ELEMENT Para      (#PCDATA) >                              (c)
<!ATTLIST Para
          classification   (U | C | S | TS | R
                            NU | NR | NC | NS | NS-S | NS-A |
                            CTS | CTS-B | CTS-BALK |
                            CTSA | NSAT | NCA)
                                                  #REQUIRED
          ownerProducer            NMTOKENS       #REQUIRED
          SCIcontrols              NMTOKENS       #IMPLIED
          SARIdentifier            NMTOKENS       #IMPLIED
          FGIsourceOpen            NMTOKENS       #IMPLIED
          FGIsourceProtected       NMTOKENS       #IMPLIED
          disseminationControls    NMTOKENS       #IMPLIED
          releasableTo             NMTOKENS       #IMPLIED
          nonICmarkings            NMTOKENS       #IMPLIED
          classifiedBy             CDATA          #IMPLIED
          classificationReason     CDATA          #IMPLIED
          derivedFrom              CDATA          #IMPLIED
          declassDate              NMTOKENS       #IMPLIED
          declassException         NMTOKENS       #IMPLIED
          declassEvent             CDATA          #IMPLIED
```

```
            typeOfExemptedSource    NMTOKENS          #IMPLIED
            dateOfExemptedSource    NMTOKEN           #IMPLIED
            declassManualReview     (true | false)    #IMPLIED
            localMarkings           NMTOKENS          #IMPLIED
            FDO                     CDATA             #IMPLIED>
```

In the following example, part (a) illustrates how an organization can declare a local attribute group that has, as its replacement text, the attribute references for two attribute declarations—one named **localMarkings** and the other named **FDO**. Part (b) illustrates how the locally-defined attribute group can be referenced as part of an element's attribute reference list to associate the two local attributes, along with the CISS ISM security attributes, with an element named **Para**.

```
<xsd:attributeGroup name=”LocalSecurityAttributesGroup”>                (a)
   <xsd:attribute ref=”localMarkings” use=”optional”/>
   <xsd:attribute ref=”FDO” use=”optional”/>
</xsd:attributeGroup>

-----------------------------------------------------------------------

<xsd:element name=”Para” type=”xsd:string”/>                            (b)
   <xsd:complexType>
      <xsd:attributeGroup ref=”ism:SecurityAttributesGroup”/>
      <xsd:attributeGroup ref=”ism:LocalSecurityAttributesGroup”/>
   </xsd:complexType>
</xsd:element>
```

3.5.2 Extending or Restricting the Controlled Vocabularies

Additional controlled vocabularies or additions and subtractions to the current controlled vocabularies are possible within an agency's controlled space. Changes to the controlled vocabularies do not affect the functionality of the CISS ISM entity set. The values used in the controlled vocabularies are recognized by the XML parser as name tokens. The XML parser does not validate the name tokens themselves. Therefore, care must be taken to ensure that any changes to the existing controlled vocabularies are the actual name token values to be stored.

Care must be exercised in order to maintain consistency in stored values. Conversion scripts can be written to correct many inconsistencies, but tighter control and handling of the controlled vocabularies would make more practical sense, and guarantee greater data reliability from the producer and for the consumer.

3.6 Creating Stylesheets

One of the guiding principles of XML is that information content within an XML document is independent of any presentation format. To the greatest degree practical, format-oriented markup should be kept out of XML documents. Therefore, in order to be rendered in a useful format, XML documents require accompanying stylesheets. Using the Extensible Stylesheet Language (XSL) (Appendix B, reference 7), developers can convert XML content for display in a web browser, into Portable Document Format (PDF) for hardcopy printing, into other XML hierarchies, into text files such as Rich Text Format (RTF), *etc.*

Each publishing organization will need to create stylesheets for web and print delivery that adhere to the styling guidelines specific to that organization. The "XSL for Transformations" (XSLT) declarative transformation language is the recommended method for creating web pages from XML documents. “XSL for Formatting Objects” (XSLFO) should be used to create PDF output and input for layout and pagination software. Stylesheets for each output type may be created to allow for publishing to various formats to meet the specific requirements of individuals and organizations.

XSLT stylesheets that process the CISS ISM attributes to create portion markings, security banners and classification/declassification blocks are available from the IC MWG web sites.

For those who choose to develop their own stylesheets, here are some guidelines:

- Use attributes **classification** and **ownerProducer** together to determine whether to output a US classification parameter, non-US classification parameter, or joint classification parameter.
- Expect the tokens in list-valued attributes to be in the order prescribed by the CAPCO Register. In other words, it should not be necessary to sort the list of values.
- Use the appropriate separators when displaying multiple values from list-valued attributes. The lists for **ownerProducer**, **FGIsourceOpen**, and **releasableTo** are all formatted differently, and **releasableTo** is formatted differently when it is used in conjunction with “REL” and in conjunction with “EYES”.
- Transform date values (in **declassDate** and **dateOfExemptedSource**) from the YYYY-MM-DD format to YYYYMMDD for display.
- Transform the tokenized control values that differ from the CAPCO abbreviations to the CAPCO form; for example, transform the **disseminationControls** value “RD-SG-1” to “RD-SG 1” for display.
- If the value list for **disseminationControls** contains “EYES” or “REL”, find the list of country codes and international organization codes in attribute **releasableTo**.
- Output “MR” in the banners if any of the conditions listed in section 7.8.3 apply.
- If more than one of the attributes **declassDate**, **declassEvent**, **declassException**, and **typeOfExemptedSource** are present, a stylesheet must determine what to put in the banners and classification/declassification block. If **declassEvent** or **typeOfExemptedSource** is present, or if **declassException** is present and equals “25X1-human”, put “MR” in the banners. If **declassDate** and **declassException** are present and **declassException** is not equal to “25X1-human”, put the first 25X token in the banners.

Most of the transformations described by these guidelines are illustrated in section 7.

4 Data Input Techniques

It is not the intent of the IC MWG that the security attributes be populated manually. The CISS security attributes were developed as a set of containers for CAPCO-authorized classification and control markings. Use of the attributes, by themselves, does not guarantee that an appropriate combination of attributes and attribute values has been specified for any given portion or product in order to produce valid portion markings, a valid top and bottom security banner and a valid classification/declassification block. Due to the potentially complex business rules associated with properly marking classified information, the use of a forms-based software interface will provide the best method of creating and storing the security markup.

Business rules, except for basic classification, were not incorporated in CISS ISM for several reasons:

- Updates can be incorporated more easily into the model.
- Business rules regarding security metadata are constantly under revision.
- The model can be customized to meet the requirements of each organization.

It will be an organization’s responsibility to understand and incorporate the required business practices for security metadata.

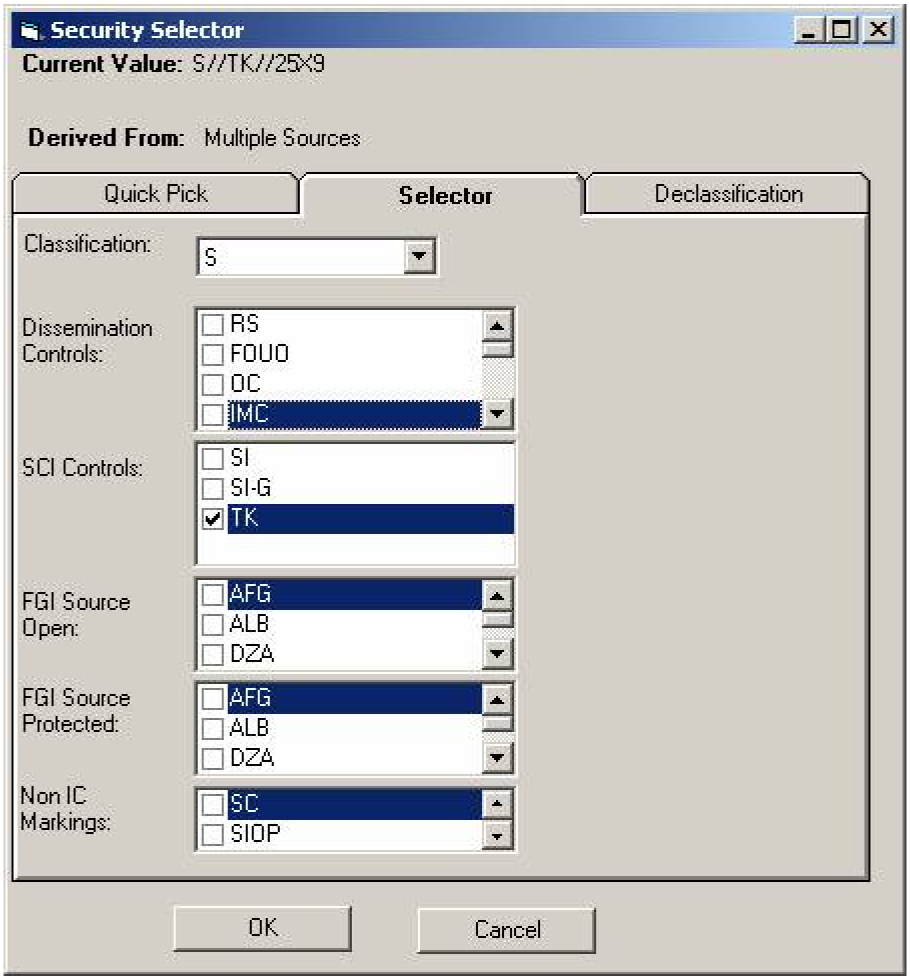
4.1 Graphical User Interfaces

A security marking Graphical User Interface (GUI) should provide a user with all of the valid CAPCO security marking options for the context in which s/he works. Business rules to support relationships of the CAPCO security markings can be incorporated into the GUI. However, most likely the GUI itself—that is, the form—will not provide the logic for validating the overall classification of a product. The use of “roll-up” scripts and human review will ensure the information is properly marked for archiving and distribution.

Figure 5 shows a notional GUI with tabbed pages for the classification and controls options. It is likely that many workable forms-based and other approaches for assisting with the entry of correct classification markings can be devised. This figure serves only to illustrate the idea. It illustrates selection options for US classification and controls.

This particular user interface makes use of XML helper files that contain the requisite controlled vocabularies. The data stored in the helper files is used to populate the dialog’s list boxes and checkboxes. This method keeps the controlled vocabularies external to the GUI code so that changes to the controlled vocabularies do not necessarily render the code obsolete.

The XML helper files are text files that can be updated easily by an administrator or authorized user in a text editor or XML authoring tool. An organization can easily customize these files to limit or extend the security markings used by that organization.



Current Value: S//TK//25X9

Derived From: Multiple Sources

Classification: S

Dissemination Controls:
□ RS
□ FOUO
□ OC
□ IMC

SCI Controls:
□ SI
□ SI-G
☑ TK

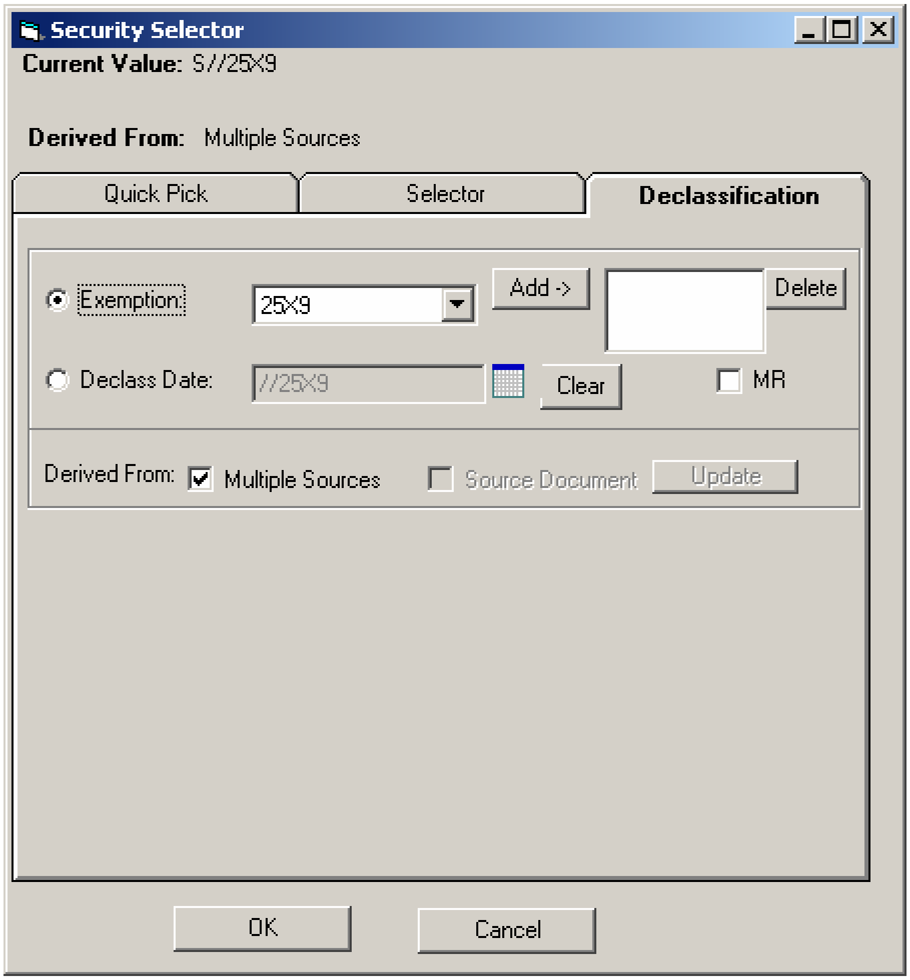
FGI Source Open:
□ AFG
□ ALB
□ DZA

FGI Source Protected:
□ AFG
□ ALB
□ DZA

Non IC Markings:
□ SC
□ SIOP

Figure 5. Security GUI with US Security Marking Options Displayed

Figure 6 illustrates a GUI that assists an author with selection of options for the classification/declassification block and the declassification parameter of the banners.



Current Value: S//25X9

Derived From: Multiple Sources

● Exemption: 25X9

○ Declass Date: //25X9

□ MR

Derived From: ☑ Multiple Sources □ Source Document

Figure 6. GUI for Selection of Declassification

Here is an example of a simple helper file that can be used in conjunction with a GUI. Once again, this is just one potentially useful approach to maintaining the controlled vocabularies in separate files. Some implementers of digital authoring solutions use XML topic maps for the vocabularies. In any case, the helper files are read by the GUI software to populate the various list and checkboxes.

This example of a helper file is an XML document that contains a concatenation of the controlled vocabularies used by the CISS ISM attributes.

```
<?xml version=”1.0” ?>
<codes>
  <vocab name=”nonICmarkings”>
    <code>SC</code>
    <code>SIOP</code>
    <code>SINFO</code>
    <code>DS</code>
    <code>XD</code>
    <code>ND</code>
    <code>SBU</code>
    <code>SBU-NF</code>
    <code>LES</code>
  </vocab>
  <vocab name=”disseminationControls”>
    <code>RS</code>
    <code>FOUO</code>
    <code>OC</code>
    ...
    <code>FISA</code>
  </vocab>
  <vocab name=”SCIcontrols”>
    <code>HCS</code>
    <code>SI</code>
    <code>SI-G</code>
    <code>SI-ECI-XXX</code>
    <code>TK</code>
  </vocab>
  <vocab name=”FGIsourceOpen”>
    <code>AFG</code>
    <code>ALB</code>
    <code>ASM</code>
    <code>DZA</code>
    ...
    <code>UNCK</code>
    <code>UNKNOWN</code>
  </vocab>
  <vocab name=”FGIsourceProtected”>
    <code>AFG</code>
    <code>ALB</code>
    <code>ASM</code>
    <code>DZA</code>
    ...
    <code>UNCK</code>
    <code>FGI</code>
  </vocab>
  <vocab name=”nonUScountries”>
    <code>AFG</code>
    <code>ALB</code>
    <code>ASM</code>
    <code>DZA</code>
    ...
    <code>ZWE</code>
  </vocab>
  <vocab name=”nonUSclassifications”>
    <code>TS</code>
    <code>S</code>
    <code>C</code>
    <code>R</code>
    <code>U</code>
    <code>CTS</code>
    <code>CTS-B</code>
    ...
    <code>NCA</code>
  </vocab>
</codes>
```

4.2 Manual Data Input

Lacking a software application that contains the CAPCO logic and presents a GUI, users may enter security markup into the XML directly using a text editor or an XML-aware authoring application that includes dialogs for setting attribute values. Due to the interrelationships among classification and control markings, users must be well versed in CAPCO and/or organizational guidelines and business rules when entering attributes directly.

Usage examples of the attributes along with associated controlled vocabularies are provided in this CISS ISM Implementation Guide. See the CISS ISM DED for data element definitions of the CISS ISM attributes. The DED will give the user an understanding of each attribute's allowed values and a complete definition.

5 Operations on the Security Attributes

Once the CISS ISM attributes are populated in an XML document or data stream, the attributes can be used for several key requirements:

1. Formatting portion marks, the top and bottom security banner and the classification/declassification block for display in authoring or editing applications, in web pages, or in print-oriented outputs (such as Portable Document Format files);
2. Rolling up the attribute values assigned to child elements in order to determine the classification and controls of the parent element; and
3. Filtering documents that have been written for multiple security domains in order to produce domain-specific outputs for dissemination.

5.1 Creating Portion Marks

The values of the CISS ISM attributes for any given portion-level element will be used to format the corresponding portion mark for display purposes. An XSLT stylesheet may be used to create the portion mark string based on the values of the attributes.

Consider the following example for an element named **Para** in an XML document.

```
<Para classification=”S” ownerProducer=”USA” SCIcontrols=”SI”
 disseminationControls=”REL” releasableTo=”USA CAN GBR”>
```

An XSLT stylesheet can be used to create the following portion mark string and place it at the beginning of the paragraph text.

```
(S//SI//REL TO USA, CAN, GBR)
```

5.2 Security Rollup

“Security Rollup” can be described as the process of deriving or determining the appropriate set of classification and control marking attributes and their values for a document, data stream or block element, based on all of the classification and control marking attributes and attribute values for subordinate elements found within the document, data stream or block element. The security rollup process is most often associated with determining the set of product-level security attributes which are used to form the security banner (high-water marking) that is displayed at the top and bottom of a document, and to form a document’s classification/declassification block. The security rollup functionality and methodology may be simple or very complex depending on the extent of security markings for which an organization needs to account.

With respect to the process of authoring a document, a security rollup may be repeatedly performed while a document is being authored. Within the authoring tool, the author may call the rollup function manually at any time, and/or a rollup will be performed automatically prior to closing any authoring session and saving the document. From an authoring standpoint, a security rollup can ensure that the document’s high-water marking will be at least at the level necessary based on the classification and control markings of the document’s current content. When a rollup is performed, an author can then verify that a document’s high-water marking is appropriate with respect to the current content, and then either accept the results of the rollup, or modify the results to designate a higher classification level if necessary.

As part of a post-authoring process, security rollup can be included in a filtering process for domain transformation (discussed below). Any automated rollup processes should be followed by human review and verification to ensure proper markings before dissemination of the documents to the community space.

The name token values in the CISS ISM controlled vocabularies duplicate, in almost all cases, the abbreviations used in portion markings authorized by CAPCO. This facilitates the straightforward generation of CAPCO-compliant portion markings with a minimum of transformation effort using attribute values containing name tokens from the controlled vocabularies. However, the generation of CAPCO-compliant security banner markings from the product-level security attributes will require more significant transformation.

5.3 Performing Domain Filtering

The CISS ISM DTD entity set and WXS enable the process of domain filtering through automated methods. Domain filtering allows a document or portions of a document to be filtered and combined using XSLT stylesheets to form products that can be disseminated to various networking domains based on the classification and/or releasability requirements of the domain. For example, Top Secret portions of a document can be automatically stripped out using an appropriate XSLT stylesheet so that the resulting document can be disseminated to a Secret network. A single XSLT stylesheet can be used to perform all domain-filtering activities. However, it may be more practical and feasible to modularize the filtering process across multiple stylesheets.

6 Using the Controlled Vocabularies

As noted above, an XML name token (NMTOKEN) consists of a string of one or more letters, digits, hyphens, underscores, periods, and colons. Most of the CISS ISM attributes require a name token or a space-delimited list of name tokens as values. As also noted, there are a relatively small number of instances when CAPCO-authorized abbreviations do not qualify as name tokens and substitutes are used. The name tokens that are the permissible values for the various CISS ISM attributes are specified in controlled vocabularies.

For attribute **classification**, the controlled vocabulary is built into the attribute declaration as a name token group in the DTD entity set and as a list of enumerations in the WXS. A validating XML parser will use the name token list or enumeration list to ensure that the value of **classification** is one of the permissible values. The controlled vocabulary for **classification** is internal to the DTD entity set and WXS because it was the expectation of the CISS ISM developers that the permissible values were very stable and would change only infrequently.

For the other attributes with controlled vocabularies the vocabularies are not built into the declarations. They are external domain value sets. They were kept out of the declarations in anticipation that they would change relatively frequently. They are documented in this guide and they exist in digital form in the IC XML Registry. It should be understood that there is no mechanism by which an XML parser can ensure that the name tokens it finds are actually taken from any of the external controlled vocabularies. All the parser can do in this case is verify that an attribute value is in fact a name token or a space-delimited list of name tokens. It is the responsibility of implementing organizations to provide a means for authors and editors to have access to the associated controlled vocabularies when selecting values for the CISS ISM attributes, and to restrict the population of attribute values to name tokens contained in those controlled vocabularies.

In some cases the domain value space of an attribute consists of two domain value sets. This is true for those attributes that specify both ISO 3166-1 country code trigraphs *and* CAPCO-defined registered international organization tetragraphs.

6.1 Replacing, Extending and Sharing

Replacing or extending the controlled vocabularies to meet the internal requirements of an organization is rather trivial. Remember, an XML parser does not validate the actual name tokens used. It only checks for unallowable characters in the name tokens.

In order to replace or extend the controlled vocabularies, an organization should first determine which of the current name tokens are relevant for its use, and then define any additional name tokens if necessary. The organization should distribute the list of “new” name tokens to authors and reviewers within the organization (see section 4.2), or integrate the new name tokens into XML helper files for a “Security GUI” as suggested in section 4.1. Obviously, because of the probability of manual input errors, checks must be utilized to ensure consistent marking and conformance to the new controlled vocabularies. Similar checks should be utilized if these controlled vocabularies are shared with other organizations.

Caveat: Any agency-specific name tokens must be removed prior to dissemination of the document’s contents into the IC shared space.

6.2 Controlled Vocabulary Listings

Each of the following attributes has one or two associated external domain value sets. The contents of the domain value sets are illustrated in section 7.

- **declassException** (section 7.7)
- **disseminationControls** (section 7.10)
- **FGIsourceOpen** (section 7.11)
- **FGIsourceProtected** (section 7.12)
- **nonICmarkings** (section 7.13)
- **ownerProducer** (section 7.14)
- **releasableTo** (section 7.15)
- **SCIcontrols** (section 7.17)
- **typeOfExemptedSource** (section 7.18)

The domain value sets are maintained as XML instances in the IC XML Registry, the vocabularies are registered as domain value documents, as explained in section 2.2. The XML schema for the domain value document type is also available in the Registry.

7 Attribute Value Specifications

The following subsections—one for each of the 18 CISS ISM attributes—show the permissible values for the attributes and the corresponding formatted marking. Also shown are usage examples. Note that this section shows only unclassified permissible values. Consult the CAPCO Register (Appendix B, reference 1) for the complete sets.

It is important to recognize that this is not an official reference for the CAPCO markings. The CAPCO Register and Implementation Manual (Appendix B, reference 2) are the authoritative sources for most of the abbreviations and markings. International Standard ISO 3166-1 is the authoritative source for country trigraph codes. The authoritative sources for the business rules are the CAPCO Implementation Manual, ISOO Directive 1 (Appendix B, reference 4), and Executive Orders 12958 and 12951.

In the following tables, the values in the "Authorized Abbreviation" and "Marking Title" columns are for displaying the stored values in the top and bottom security banner. Several examples are provided to illustrate how the controlled vocabulary name tokens are incorporated into the XML markup.

7.1 classification

This attribute is used at both the product and the element levels to identify the highest level of classification of the information. It is manifested in portion marks and security banners.

7.1.1 Authorized Values

Stored Value (Authorized Portion Marking)	Authorized Abbreviation	Marking Title
TS		TOP SECRET
S		SECRET
C		CONFIDENTIAL
U		UNCLASSIFIED
R		RESTRICTED
CTS		COSMIC TOP SECRET
CTS-B		COSMIC TOP SECRET-BOHEMIA
CTS-BALK		COSMIC TOP SECRET-BALK
NS		NATO SECRET
NS-S		NATO SECRET-SAVATE
NS-A		NATO SECRET-AVICULA

Stored Value (Authorized Portion Marking)	Authorized Abbreviation	Marking Title
NC		NATO CONFIDENTIAL
NR		NATO RESTRICTED
NU		NATO UNCLASSIFIED
CTSA		COSMIC TOP SECRET ATOMAL
NSAT		SECRET ATOMAL
NCA		CONFIDENTIAL ATOMAL

7.1.2 Examples

XML Markup	Display Values

classification="C"
ownerProducer="USA"
disseminationControls="OC REL"
releasableTo="USA AUS GBR"
declassDate="2007-04-01"
	Security Banner
	CONFIDENTIAL//ORCON/REL TO USA, AUS, GBR//20070401

classification="NS"
ownerProducer="NATO"
declassDate="2005-08-01"
	Security Banner
	//**NATO SECRET**//MR

classification="TS"
ownerProducer="USA"
SCIcontrols="SI"
disseminationControls="REL"
releasableTo="USA AUS GBR"
	Portion Mark
	TS//SI//REL TO USA, AUS, GBR

classification="CTS-B"
ownerProducer="NATO"
FGIsourceOpen="NATO"
	Portion Mark
	//**CTS-B**

7.1.3 Notes

1. Attribute **classification** must always be used in conjunction with attribute **ownerProducer**. The two together determine the classification and the type of classification—US, non-US, or joint.

    - When **ownerProducer** equals “USA”, the classification is a US classification, and the permissible values are U, C, S and TS.
    - When **ownerProducer** equals “NATO”, the classification is a non-US classification and the permissible values are the NATO classifications: CTS, CTS-B, CTS-BALK, NS, NS-S, NS-A, NC, NR, NU, CTSA, NSAT, and NCA.
    - When **ownerProducer** equals a country trigraph or international organization tetragraph other than “USA” or “NATO”, the classification is a non-US classification and the permissible values are U, R, C, S and TS.

- When **ownerProducer** equals a multi-valued list of trigraphs and/or tetragraphs, the classification is a joint classification. If "USA" is one of the **ownerProducer** values, the permissible classifications are U, C, S and TS. If "USA" is not one of the **ownerProducer** values, the permissible classifications are U, R, C, S and TS.

2. Although this attribute is technically optional when the %SecurityAttributesOption entity is applied to an element by a DTD or schema, this attribute along with the **ownerProducer** attribute must always be used and an attribute value must be explicitly indicated when security attributes are specified for an element.

7.2 classificationReason

This attribute is used primarily at the product level to specify the basis for an original classification decision. It is manifested only in the "Reason" line of a document's Classification/Declassification block.

7.2.1 Examples

XML Markup	Display Values
`classificationReason="1.4(b)"`	**Classification/Declassification Block** Reason: **1.4(b)**
`classificationReason="1.4(b) 1.4(d)"`	**Classification/Declassification Block** Reason: **1.4(b) 1.4(d)**
`classificationReason="Foreign Government Information"`	**Classification/Declassification Block** Reason: **Foreign Government Information**

7.2.2 Notes

1. The attribute value may be a citation of one or more of the subparagraphs 1.4(a) through 1.4(h) of EO 12958 Amended, or other explanatory text.

2. When the reason for classification is not apparent from the content of the information, the original classification authority shall provide a more detailed explanation of the reason for classification.

7.3 classifiedBy

This attribute is used primarily at the product level to specify the identity, by name or personal identifier, and position title of the original classification authority for a resource. It is manifested only in the "Classified By" line of a document's Classification/Declassification block.

7.3.1 Examples

XML Markup	Display Values
`classifiedBy=”John Doe, Position Title”`	**Classification/Declassification Block** Classified By: **John Doe, Position Title**
`classifiedBy=”ID#, Position Title”`	**Classification/Declassification Block** Classified By: **ID#, Position Title**

7.4 dateOfExemptedSource

This attribute is used primarily at the product level to specify the year, month and day of publication or release of a source document, or the most recent source document, that was itself marked with OADR or X1 through X8. It is manifested only in the “Declassify On” line of a document’s Classification/Declassification block.

7.4.1 Examples

XML Markup	Display Values

`typeOfExemptedSource=”OADR”`
`dateOfExemptedSource=”1990-10-20”`
	Classification/Declassification Block
	Declassify On: Source Marked “OADR”, Date of Source: **19901020**

`typeOfExemptedSource=”X1”`
`dateOfExemptedSource=”2000-10-20”`
	Classification/Declassification Block
	Declassify On: Source Marked “X1”, Date of Source: **20001020**

7.4.2 Notes

1. This attribute should only be used in conjunction with attribute **typeOfExemptedSource**.
2. When a document is classified derivatively on the basis of more than one source document or more than one element of a classification guide, the attribute’s value shall reflect the longest duration of any of its sources (*i.e.*, the date of origin of the most recent source).
3. This attribute’s value should conform to the YYYY-MM-DD format. It should be transformed to YYYYMMDD for presentation.

7.5 declassDate

This attribute is used primarily at the product level to specify a year, month and day for declassification, upon the occurrence of which the information shall be automatically declassified. It is manifested in the declassification date field of a document’s security banners and in the “Declassify On” line of a document’s classification/declassification block.

7.5.1 Examples

XML Markup	Display Values

classification="TS"
ownerProducer="USA"
SCIcontrols="SI"
declassDate="2010-01-01"
	Security Banner
	TOP SECRET//COMINT//**20100101**
	Classification/Declassification Block
	Declassify On: **20100101**

7.5.2 Notes

1. This attribute's value should conform to the YYYY-MM-DD format. It should be transformed to YYYYMMDD for presentation.
2. Inclusion of this attribute's value in the declassification date field of a document's security banners may be overridden by programmatic determinations which require the declassification date field to be "MR", indicating that manual review is required for declassification of the information. However, the declassification date will still be specified in the document's classification/declassification block.

7.6 declassEvent

This attribute is used primarily at the product level to specify a description of an event for declassification, upon the occurrence of which the information shall be automatically declassified. It is manifested only in the "Declassify On" line of a document's classification/declassification block.

7.6.1 Examples

XML Markup	Display Values
declassEvent="Return of POTUS from Iraq"	**Classification/Declassification Block** Declassify On: **Return of POTUS from Iraq**

7.6.2 Notes

1. When this attribute is used, the declassification date field of a document's security banners must be "MR", indicating that manual review is required for declassification of the information.

7.7 declassException

This attribute is used primarily at the product level to specify one or more exceptions to the nominal 25-year point for automatic declassification. It is manifested in the declassification date field of a document's security banners and in the "Declassify On" line of a document's classification/declassification block.

7.7.1 Authorized Values

Value	Description
25X1-human	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(1)
25X1	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(1)
25X2	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(2)
25X3	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(3)
25X4	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(4)
25X5	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(5)
25X6	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(6)
25X7	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(7)
25X8	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(8)
25X9	25-year exemption code for information declassification, EO 12958, Section 3.3 (b)(9)

7.7.2 Examples

XML Markup	Display Values

classification=”S”
ownerProducer=”USA”
disseminationControls=”REL”
releasableTo=”USA AUS”
declassDate=”2040-10-01”
declassException=”25X4”
	Security Banner
	SECRET//REL TO USA, AUS//**25X4**
	Classification/Declassification Block
	Declassify On: **25X4**, 20401001

classification=”TS”
ownerProducer=”USA”
SCIcontrols=”SI”
derivedFrom=”Multiple Sources”
declassDate=”2040-10-01”
declassException=”25X1 25X2 25X3”
	Security Banner
	TOP SECRET//COMINT//**25X1**
	Classification/Declassification Block
	Declassify On: **25X1, 25X2, 25X3**, 20401001

classification=”S”
ownerProducer=”USA”
disseminationControls=”REL”
releasableTo=”USA AUS”
declassException=”25X1-human”
	Security Banner
	SECRET//REL TO USA, AUS//**MR**
	Classification/Declassification Block
	Declassify On: **25X1-human**

7.7.3 Notes

1. This attribute is named **declassException** and the attribute’s name token values are referred to as “exceptions” in CISS ISM documentation in order to avoid confusion with the **typeOfExemptedSource** and **dateOfExemptedSource** attributes and their values. However, the **declassException** attribute’s name token values do correspond to the 25-year declassification “exemptions”, as they are identified in EO 12958, the CAPCO Implementation Manual, and elsewhere.
2. Other than when the exemption pertains to the identity of a confidential human source, or a human intelligence source, when a 25-year exemption is applied, the **declassDate** or **declassEvent** attribute shall also be updated and the “Declassify On” line in the classification/declassification block shall include the new date or event for declassification.
3. Multiple declassification exceptions may apply to a single document. The attribute’s value may be a space delimited list of name tokens. All of a document’s declassification exceptions will appear in its classification/declassification block. However, only the first (*i.e.*, most restrictive) exception appears in the declassification date field of a document’s security banners.
4. When “25X1-human” is specified in the attribute value, the declassification date field of a document’s security banners must be “MR”, indicating that manual review is required for declassification of the information.

7.8 declassManualReview

This attribute is used primarily at the product level as an indication of the need for manual review for declassification of the information, over and above the usual programmatic determinations. It is manifested only in the declassification date field of a document's security banners and is never manifested in the "Declassify On" line of a document's classification/declassification block.

7.8.1 Authorized Values

Value	Description
true	An indication that manual review is required
false	An indication that manual review is not required

7.8.2 Examples

XML Markup	Display Values

`classification="S"`
`ownerProducer="USA"`
`declassDate="2010-10-10"`
`declassManualReview="true"`
	Security Banner
	`SECRET//`**`MR`**

7.8.3 Notes

1. The usual programmatic determinations of the need for manual review for declassification are based on the presence of:
   - Non-US or jointly owned and/or produced information
   - HCS
   - FGI
   - RD or FRD
   - Information subject to the "25X1-human" declassification exception
   - Information subject to an event-triggered declassification
   - Information derivatively classified from any source document or classification guide that contains the declassification instruction OADR or X1 thru X8
2. Attribute **declassManualReview** should be used *only* to indicate the need for manual review for declassification *over and above* the usual programmatic determinations. XSLT stylesheets should not depend exclusively on the presence of this attribute to determine when "MR" is required in the declassification date field of a document's security banners.
3. This attribute is included in CISS ISM to support use cases presented by two IC agencies. Based on an interpretation from CAPCO, it should not be required. The situations listed in note 1 should govern the use of "MR".
4. Although "false" is currently an authorized value for this attribute, it serves no purpose when it has this value. To signify "false", simply don't use the attribute.

7.9 derivedFrom

This attribute is used primarily at the product level as a citation of the authoritative source of the classification markings used in a resource. It is manifested only in the “Derived From” line of a document’s classification/declassification block.

7.9.1 Examples

XML Markup	Display Values
derivedFrom=”Multiple Sources”	**Classification/Declassification Block** Derived From: **Multiple Sources**
derivedFrom=”Source Document Citation, dated October 20, 2003”	**Classification/Declassification Block** Derived From: **Source Document Citation, dated October 20, 2003**
derivedFrom=”Classification Guide Citation, dated October 20, 2003”	**Classification/Declassification Block** Derived From: **Classification Guide Citation, dated October 20, 2003**

7.9.2 Notes

1. If the attribute value does not specify the title and date of a classification guide or the title and date of a source document, it should be explicitly specified to be “Multiple Sources”.
2. When classification is derived from multiple sources, CISS ISM assumes that the list of sources is maintained elsewhere—normally with a record copy of the document. Users of generic document models, such as the IC Metadata Standard for Publications, may at their discretion insert a list of the classification sources in the body matter or an appendix.

7.10 disseminationControls

This attribute is used at both the product and the element levels to identify the expansion or limitation on the distribution of the information. It is manifested in portion marks and security banners.

7.10.1 Authorized Values

Stored Value (Authorized Portion Marking)	Authorized Abbreviation	Marking Title
RS	RSEN	RISK SENSITIVE
FOUO	FOUO	FOR OFFICIAL USE ONLY
OC	ORCON	ORIGINATOR CONTROLLED

Stored Value (Authorized Portion Marking)	Authorized Abbreviation	Marking Title
IMC	IMCON	CONTROLLED IMAGERY
SAMI	SAMI	SOURCES AND METHODS INFORMATION
NF	NOFORN	NOT RELEASABLE TO FOREIGN NATIONALS
PR	PROPIN	CAUTION-PROPRIETARY INFORMATION INVOLVED
REL	REL TO	AUTHORIZED FOR RELEASE TO _____
RELIDO	RELIDO	RELEASABLE BY INFORMATION DISCLOSURE OFFICIAL
RD	RD	RESTRICTED DATA
RD-CNWDI	RD-CNWDI	RESTRICTED DATA-CRITICAL NUCLEAR WEAPON DESIGN INFORMATION
RD-SG-1 through RD-SG-15	RD-SIGMA 1 through RD-SIGMA 15	RESTRICTED DATA-SIGMA 1 through RESTRICTED DATA-SIGMA 15
FRD	FRD	FORMERLY RESTRICTED DATA
FRD-CNWDI	FRD-CNWDI	FORMERLY RESTRICTED DATA-CRITICAL NUCLEAR WEAPON DESIGN INFORMATION
FRD-SG-1 through FRD-SG-15	FRD-SIGMA 1 through FRD-SIGMA 15	FORMERLY RESTRICTED DATA-SIGMA 1 through FORMERLY RESTRICTED DATA-SIGMA 15
DCNI	DOD UCNI	DOD CONTROLLED NUCLEAR INFORMATION
ECNI	DOE UCNI	DOE CONTROLLED NUCLEAR INFORMATION
EYES		USA/____ EYES ONLY
LAC		LACONIC

Stored Value (Authorized Portion Marking)	Authorized Abbreviation	Marking Title
FRONTO		FRONTO
KEYRUT		KEYRUT
SEABOOT		SEABOOT
SETTEE		SETTEE
DSEN		DEA SENSITIVE
FISA	FISA	FOREIGN INTELLIGENCE SURVEILLANCE ACT

7.10.2 Examples

XML Markup	Display Values

classification="TS"
ownerProducer="USA"
SCIcontrols="SI TK"
disseminationControls="RD-SG-1 RD-SG-8"
	Security Banner
	TOP SECRET//COMINT/TALENT KEYHOLE//**RD-SIGMA 1-SIGMA 8**//MR

classification="C"
ownerProducer="USA"
disseminationControls="OC REL"
releasableTo="USA AUS GBR"
declassDate="2007-04-01"
	Security Banner
	CONFIDENTIAL//**ORCON/REL TO** USA, AUS, GBR//20070401

classification="C"
ownerProducer="USA"
disseminationControls="REL"
releasableTo="USA AUS GBR"
	Portion Mark
	C//**REL TO** USA, AUS, GBR

classification="S"
ownerProducer="USA"
disseminationControls="EYES"
releasableTo="USA AUS CAN GBR"
	Portion Mark
	S//USA/AUS/CAN/GRB **EYES ONLY**

7.10.3 Notes

1. Multiple dissemination controls may apply to a single portion and/or to the document. This attribute's value may be a single XML name token or a space-delimited list of name tokens, which must be ordered as specified in the CAPCO Register.
2. The authorized portion mark differs from the stored value for RD-SG-1 through RD-SG-15 and FRD-SG-1 through FRD-SG-15, because the authorized portion mark does not qualify as an XML name token.

3. Multiple values for RD-SG-1 through RD-SG-15 and FRD-SG-1 through FRD-SG-15 are stored (in the example below) as follows:

   disseminationControls="RD-SG-1 RD-SG-2 RD-SG-3"

4. However, the dissemination controls field of a portion mark using the example above is rendered and displayed as follows:

   //RD-SG 1-SG 2-SG 3

5. When the REL or EYES name token is selected, the **releasableTo** attribute is required also. See section 7.15 for information regarding usage of its name token values.

6. When "RD", "RD-CNWDI", "RD-SIGMA-1" through "RD-SIGMA-15", "FRD", "FDR-CNWDI", or "FRD-SIGMA-1" through "FRD-SIGMA-15" is specified in the attribute value, the declassification date field of a document's security banners must be "MR", indicating that manual review is required for declassification of the information.

7.11 FGIsourceOpen

This attribute is used at both the product and the element levels within US controlled documents or US/non-US jointly controlled documents. The attribute is used to identify the known and disclosable originating source (country or registered international organization) or sources of information of non-US origin, or to indicate that the source of information of non-US origin is unknown. It is manifested in portion marks and security banners.

7.11.1 Authorized Values

Stored Value	Description
AFG ALB … ZMB ZWE	ISO 3166-1 country trigraphs (excluding USA)
BWCS	Biological Weapons Convention States
CFCK	ROK/US Combined Forces Command, Korea
CNFC	Combined Naval Forces Central Command
CPMT	Civilian Protection Monitoring Team for Sudan
CWCS	Chemical Weapons Convention States
ECTF	European Counter-Terrorism Forces
EFOR	European Union Stabilization Forces in Bosnia
GCTF	Global Counter-Terrorism Forces
GMIF	Global Maritime Interception Forces
IESC	International Events Security Coalition
ISAF	International Security Assistance Forces for Afghanistan
KFOR	Stabilization Forces in Kosovo
MCFI	Multinational Coalition Forces – Iraq
MIFH	Multinational Interim Force Haiti

Stored Value	Description
NATO	North Atlantic Treaty Organization
OSAG	Olympic Security Advisory Group
UNCK	United Nations Command, Korea
UNKNOWN	Source of information is unknown

7.11.2 Examples

XML Markup	Display Values

classification="S"
ownerProducer="USA"
FGIsourceOpen="AUS"
	Security Banner
	SECRET//**FGI AUS**//MR

classification="S"
ownerProducer="USA"
FGIsourceOpen="AUS NZL NATO"
	Security Banner
	SECRET//**FGI AUS NZL NATO**//MR

classification="C"
ownerProducer="USA"
FGIsourceOpen="UNKNOWN"
	Security Banner
	CONFIDENTIAL//**FGI**//MR

classification="S"
ownerProducer="DEU"
FGIsourceOpen="DEU"
disseminationControls="REL"
releasableTo="USA AUS GBR"
	Portion Mark
	//**DEU** S//REL TO USA, AUS, GBR

classification="C"
ownerProducer="USA"
FGIsourceOpen="UNKNOWN"
	Portion Mark
	//**FGI** C

7.11.3 Notes

1. At the portion level, the attribute's value will usually be identical to the attribute **ownerProducer** value for the portion. There are two exceptions. The first exception is when attribute **FGIsourceOpen** equals "UNKNOWN", the IC ISM guideline is that attribute **ownerProducer** will equal "USA". The second exception is for US/non-US jointly controlled portions. In this case, since "USA" is not an allowable value for attribute **FGIsourceOpen**, it will not contain this value.
2. At the portion level, when the attribute equals "UNKNOWN" (and attribute **ownerProducer** equals "USA"), the portion markings will be a non-US style marking as in the final example above.
3. When this attribute is used, the declassification date field of the document's security banners must be "MR", indicating that manual review is required for declassification of the information.

7.12 FGIsourceProtected

This attribute is used at both the product and the element levels within US controlled documents or US/non-US jointly controlled documents. As described in section 2.6, this attribute has unique specific rules concerning its usage. This discussion is repeated here for emphasis. The **FGIsourceProtected** attribute has a dual purpose. Within ICSIS shared spaces, the attribute serves only to indicate the presence of information which is categorized as foreign government information according to CAPCO guidelines for which the source(s) of the information is concealed. Within ICSIS shared spaces, this attribute's value will always be "FGI". The attribute may also be employed in this manner within protected internal organizational spaces. However, within protected internal organizational spaces this attribute may alternatively be used to maintain a formal record of the foreign country or countries and/or registered international organization(s) that are the non-disclosable owner(s) and/or producer(s) of information which is categorized as foreign government information according to CAPCO guidelines for which the source(s) of the information must be concealed when the resource is disseminated to ICSIS shared spaces. If the attribute is employed in this manner, then additional measures must be taken prior to dissemination of the resource in any form to ICSIS shared spaces so that any indications of the non-disclosable owner(s) and/or producer(s) of foreign government information within the resource are eliminated.

7.12.1 Authorized Values

Stored Value	Description
AFG ALB … ZMB ZWE	ISO 3166-1 country trigraphs (excluding USA)
BWCS	Biological Weapons Convention States
CFCK	ROK/US Combined Forces Command, Korea
CNFC	Combined Naval Forces Central Command
CPMT	Civilian Protection Monitoring Team for Sudan
CWCS	Chemical Weapons Convention States
ECTF	European Counter-Terrorism Forces
EFOR	European Union Stabilization Forces in Bosnia
GCTF	Global Counter-Terrorism Forces
GMIF	Global Maritime Interception Forces
IESC	International Events Security Coalition
ISAF	International Security Assistance Forces for Afghanistan
KFOR	Stabilization Forces in Kosovo
MCFI	Multinational Coalition Forces – Iraq
MIFH	Multinational Interim Force Haiti
NATO	North Atlantic Treaty Organization
OSAG	Olympic Security Advisory Group
UNCK	United Nations Command, Korea

Stored Value	Description
FGI	Foreign Government Information

7.12.2 Examples

XML Markup	Display Values

classification="C"
ownerProducer="USA"
FGIsourceProtected="AUS"
disseminationControls="OC"
	Security Banner
	CONFIDENTIAL//**FGI**//ORCON//MR

classification="S"
ownerProducer="NZL USA"
FGIsourceProtected="CAN DEU"
	Security Banner
	//JOINT SECRET NZL USA//**FGI**//MR

classification="S"
ownerProducer="GBR"
FGIsourceProtected="GBR"
disseminationControls="NF"
	Portion Mark
	//**FGI** S//NF

classification="C"
ownerProducer="DEU"
FGIsourceProtected="DEU"
	Portion Mark
	//**FGI** C

classification="S"
ownerProducer="FGI"
FGIsourceProtected="FGI"
	Portion Mark
	//**FGI** S

7.12.3 Notes

1. At the portion level, the attribute's value will usually be identical to the attribute **ownerProducer** value for the portion. The exception is for US/non-US jointly controlled portions. In this case, since "USA" is not an allowable value for attribute **FGIsourceProtected**, it will not contain this value.
2. When the source(s) of the foreign government information must be concealed, the attribute's value must be "FGI".
3. When this attribute is used, the declassification date field of the document's security banners must be "MR", indicating that manual review is required for declassification of the information.
4. In all cases, the corresponding portion marking or banner marking should be compliant with CAPCO guidelines for FGI when the source must be concealed. In other words, even if the attribute is being employed within protected internal organizational spaces to maintain a formal record of the non-disclosable owner(s) and/or producer(s) within an XML resource, if the resource is rendered for display within the protected internal organizational spaces in any format by a stylesheet or as a result of any other transformation process, then the non-disclosable owner(s) and/or producer(s) should not be included in the corresponding portion marking or banner marking.

7.13 nonICmarkings

This attribute is used at both the product and the element levels to identify classified information originating from non-intel components of the US Department of Defense or the US Department of Energy. It is manifested in portion marks and security banners.

7.13.1 Authorized Values

Stored Value (Authorized Portion Marking)	Authorized Abbreviation	Marking Title
SC	SPECAT	SPECIAL CATEGORY
SIOP	SIOP-ESI	SINGLE INTEGRATED OPERATIONS PLAN-EXTREMELY SENSITIVE INFORMATION
SINFO		SENSITIVE INFORMATION
DS	LIMDIS	LIMITED DISTRIBUTION
XD	EXDIS	EXCLUSIVE DISTRIBUTION
ND	NODIS	NO DISTRIBUTION
SBU	SBU	SENSITIVE BUT UNCLASSIFIED
SBU-NF	SBU NOFORN	SENSITIVE BUT UNCLASSIFIED NOFORN
LES	LES	LAW ENFORCEMENT SENSITIVE

7.13.2 Examples

XML Markup	Display Values

classification=”S”
ownerProducer=”USA”
nonICmarkings=”SC SIOP”
declassDate=”2008-03-15”
	Security Banner
	SECRET//**SPECAT/SIOP-ESI**//20080315

classification=”U”
ownerProducer=”USA”
nonICmarkings=”SBU-NF”
	Security Banner
	UNCLASSIFIED//**SBU NOFORN**

classification=”S”
ownerProducer=”USA”
nonICmarkings=”XD”
	Portion Mark
	S//**XD**

classification=”U”
ownerProducer=”USA”
nonICmarkings=”SINFO”
	Portion Mark
	U//**SINFO**

7.13.3 Law Enforcement Sensitive Information

LAW ENFORCEMENT SENSITIVE (LES) is not an authorized IC classification and control marking in the CAPCO Register. However, CAPCO has published interim marking guidance concerning the incorporation of LES information into IC products. “LES” has been included as a permissible value for attribute **nonICmarkings** in CISS ISM in order to facilitate compliance with the CAPCO interim marking guidance in XML-based products.

These are the CAPCO interim guidelines for LES in classified documents.

- Use separate portions for LES information. Do not commingle classified information and LES information within the same portion.
- Do not use LES in the overall classification line.
- Use NOFORN in the overall classification line to prevent unauthorized release to a foreign government.

These are the CAPCO interim guidelines for LES in unclassified documents.

- Mark all portions containing LES information with “(U//LES)”.
- If the whole document is LES, then mark the top and bottom as “UNCLASSIFIED//LAW ENFORCEMENT SENSITIVE”.
- If there is other unclassified information in the document, then mark the top and bottom “UNCLASSIFIED//FOR OFFICIAL USE ONLY”.

7.14 ownerProducer

This attribute is used at both the product and the element levels to identify the national government or international organization owner(s) and/or producer(s) of the information. The attribute value may be manifested in portion marks or security banners.

7.14.1 Authorized Values

Stored Value	Description
AFG ALB … ZMB ZWE	ISO 3166-1 country trigraphs
BWCS	Biological Weapons Convention States
CFCK	ROK/US Combined Forces Command, Korea
CNFC	Combined Naval Forces Central Command
CPMT	Civilian Protection Monitoring Team for Sudan
CWCS	Chemical Weapons Convention States
ECTF	European Counter-Terrorism Forces
EFOR	European Union Stabilization Forces in Bosnia
GCTF	Global Counter-Terrorism Forces
GMIF	Global Maritime Interception Forces
IESC	International Events Security Coalition

Stored Value	Description
ISAF	International Security Assistance Forces for Afghanistan
KFOR	Stabilization Forces in Kosovo
MCFI	Multinational Coalition Forces – Iraq
MIFH	Multinational Interim Force Haiti
NATO	North Atlantic Treaty Organization
OSAG	Olympic Security Advisory Group
UNCK	United Nations Command, Korea
FGI	Foreign Government Information

7.14.2 Examples

XML Markup	Display Values

classification="TS"
ownerProducer="USA"
SCIcontrols="SI"
disseminationControls="REL"
releasableTo="USA GBR"
declassDate="2015-09-30"
	Security Banner
	TOP SECRET//COMINT//REL TO USA, GBR//20150930

classification="R"
ownerProducer="AUS"
declassDate="2010-01-01"
	Security Banner
	//**AUS** RESTRICTED//MR

classification="TS"
ownerProducer="USA"
SCIcontrols="SI"
disseminationControls="OC REL"
releasableTo="USA GBR"
	Portion Mark
	TS//SI//OC/REL TO USA, GBR

classification="CTS"
ownerProducer="NATO"
FGIsourceOpen="NATO"
	Portion Mark
	//CTS

classification="S"
ownerProducer="USA NATO"
FGIsourceOpen="USA NATO"
disseminationControls="NF"
	Portion Mark
	//JOINT S **USA NATO**//NF

classification="C"
ownerProducer="FGI"
FGIsourceProtected="FGI"
disseminationControls="NF"
	Portion Mark
	//**FGI** C//NF

7.14.3 Notes

1. Attribute **ownerProducer** must be used in conjunction with attribute **classification**. This attribute is the primary indication as to whether the corresponding information is "US", "non-US" or "joint". The format of both portion marks and security banners is slightly different for each of these three situations.
2. Although this attribute is technically optional when the %SecurityAttributesOption entity is applied to an element by a DTD or schema, this attribute along with **classification** must always be used and an attribute value must be explicitly indicated when security attributes are specified for an element.
3. When joint ownership applies, list country trigraphs in strict alphabetical order. List international organization tetragraphs in strict alphabetical order. If both trigraphs and tetragraphs apply, list trigraphs first.
4. The value of this attribute may potentially indicate the non-disclosable owner(s) and/or producer(s) of information categorized as foreign government information according to CAPCO guidelines for which the source(s) of the information must be concealed when the resource is disseminated to ICSIS shared spaces. This situation is acceptable within protected internal organizational spaces. However, when this situation exists, additional measures must be taken prior to dissemination of the resource in any form to ICSIS shared spaces so that the non-disclosable owner(s) and/or producer(s) of foreign government information within the resource will be concealed. Under these specific circumstances, within ICSIS shared spaces, this attribute's value should be "FGI".
5. When this attribute value contains any name token other than "USA", indicating that it pertains to non-US or jointly owned and/or produced information, the declassification date field of a document's security banners must be "MR", indicating that manual review is required for declassification of the information.

7.15 releasableTo

This attribute is used at both the product and the element levels to identify the country or countries and/or international organization(s) to which classified information may be released based on the determination of an originator in accordance with established foreign disclosure procedures. It is manifested in portion marks and security banners.

7.15.1 Authorized Values

Stored Value	Description
AFG ALB … ZMB ZWE	ISO 3166-1 country trigraphs
BWCS	Biological Weapons Convention States
CFCK	ROK/US Combined Forces Command, Korea
CNFC	Combined Naval Forces Central Command
CPMT	Civilian Protection Monitoring Team for Sudan
CWCS	Chemical Weapons Convention States
ECTF	European Counter-Terrorism Forces

Stored Value	Description
EFOR	European Union Stabilization Forces in Bosnia
GCTF	Global Counter-Terrorism Forces
GMIF	Global Maritime Interception Forces
IESC	International Events Security Coalition
ISAF	International Security Assistance Forces for Afghanistan
KFOR	Stabilization Forces in Kosovo
MCFI	Multinational Coalition Forces – Iraq
MIFH	Multinational Interim Force Haiti
NATO	North Atlantic Treaty Organization
OSAG	Olympic Security Advisory Group
UNCK	United Nations Command, Korea

7.15.2 Examples

XML Markup	Display Values

classification=”S”
ownerProducer=”USA”
SCIcontrols=”SI”
disseminationControls=”OC REL”
releasableTo=”USA AUS NZL”
declassDate=”2015-03-01”
	Security Banner
	SECRET//COMINT//ORCON/REL TO **USA, AUS, NZL**//20150301

classification=”TS”
ownerProducer=”USA”
SCIcontrols=”SI-G”
FGIsourceOpen=”GBR”
disseminationControls=”EYES”
releasableTo=”USA AUS”
	Security Banner
	TOP SECRET//COMINT-GAMMA//FGI GBR//**USA/AUS** EYES ONLY//MR

classification=”TS”
ownerProducer=”USA”
SCIcontrols=”SI-G TK”
disseminationControls=”EYES”
releasableTo=”USA AUS”
	Portion Mark
	TS//SI-G/TK//**USA/AUS** EYES ONLY

classification=”C”
ownerProducer=”USA”
FGIsourceOpen=”UNKNOWN”
disseminationControls=”PR REL”
releasableTo=”USA GBR”
	Portion Mark
	//FGI C//PR/REL TO **USA, GBR**

7.15.3 Notes

1. When attribute **releasableTo** is used, the "USA" name token is required. It must be the first name token in the space-delimited list of values. Additional country name tokens are stored in alphabetical order followed by additional registered international organization name tokens in alphabetical order. The following example illustrates this requirement.

   releasableTo="USA AUS GBR NZL NATO"

2. If the "REL" name token is used in attribute **disseminationControls**, the portion mark or security banner using this example is rendered and displayed as follows.

   //REL TO USA, AUS, GBR, NZL, NATO

3. If the "EYES" name token is used in attribute **disseminationControls**, the portion mark or security banner using this example is rendered and displayed as follows.

   //USA/AUS/GBR/NZL/NATO EYES ONLY

4. If a portion level **releasableTo** attribute value is identical to the product level **releasableTo** attribute value, and the portion level and product level **disseminationControls** attribute values both contain either "REL" or "EYES", then the **releasableTo** value need not be displayed in the portion mark. For example, using the following product level and portion level elements, the portion mark for the **Para** element could be simplified to "(C//REL)".

```
<Security classification="S" ownerProducer="USA"
        disseminationControls="REL" releasableTo="USA GBR"
        .../>
<Para classification="C" ownerProducer="USA"
        disseminationControls="REL" releasableTo="USA GBR">
```

7.16 SARIdentifier

This attribute is used at both the product and the element levels to identify Special Access Required program identifier(s). It is manifested in portion marks and security banners.

7.16.1 Authorized Values

Stored Value (Authorized Portion Marking)	Authorized Abbreviation	Marking Title
program trigraph or digraph	SAR-[program identifier]	SPECIAL ACCESS REQUIRED-[program identifier]

7.16.2 Examples

XML Markup	Display Values

classification="TS"
ownerProducer="USA"
SARIdentifier="ABC"
declassDate="2010-08-30"
	Security Banner
	
	TOP SECRET//**SAR-ALPHA BRAVO CHARLIE**//20100830

classification="TS"
ownerProducer="USA"
	Security Banner

XML Markup	Display Values
SARIdentifier="ABC DE" declassDate="2010-08-30"	TOP SECRET//**SAR-ALPHA BRAVO CHARLIE/SAR-DELTA ECHO**//20100830

classification="TS"
ownerProducer="USA"
SARIdentifier="ABC"
	Portion Mark
	TS//**SAR-ABC**

classification="TS"
ownerProducer="USA"
SARIdentifier="ABC DE"
	Portion Mark
	TS//**SAR-ABC/SAR-DE**

7.16.3 Notes

1. The SAR program identifiers and program trigraphs and digraphs used in the examples above are for illustration purposes only. The name tokens in the attribute's value will be actual program trigraphs and digraphs. An XSLT stylesheet will need to associate the name tokens in the attribute values with the actual SAR program identifiers for display in the document's security banners.
2. The allowable values for this attribute are not identical to the corresponding CAPCO authorized portion markings, even though the authorized portion markings are valid name tokens. When CAPCO separated SAR markings from non-IC markings, and created a distinct classification and control markings category for SAR markings, and as a result attribute **SARIdentifier** was incorporated into IC ISM, it became unnecessary and redundant to include the "SAR-" prefix with SAR program trigraphs and digraphs in the attribute value. XSLT stylesheets will need to render SAR markings which include the "SAR-" prefix within portion markings and security banners, in compliance with CAPCO guidelines. See the examples above.

7.17 SCIcontrols

This attribute is used at both the product and the element levels to identify classified information concerning or derived from intelligence sources, methods, or analytical processes which is required to be handled within formal control systems established by the DCI (in accordance with DCID 1/19, Section 1.1). It is manifested in portion marks and security banners.

7.17.1 Authorized Values

Stored Value (Authorized Portion Marking)	Authorized Abbreviation	Marking Title
HCS	HCS	HUMINT
SI	SI	COMINT
SI-G	SI-G	COMINT-GAMMA
SI-ECI-XXX	SI-ECI XXX	COMINT-ECI XXX
TK	TK	TALENT KEYHOLE

7.17.2 Examples

XML Markup	Display Values

classification=”TS”
ownerProducer=”USA”
SCIcontrols=”SI-ECI-ABC SI-ECI-XYZ”
disseminationControls=”NF”
declassDate=”2010-08-30”
	Security Banner
	TOP SECRET//**COMINT-ECI ABC-ECI XYZ**//NOFORN//20100830

classification=”TS”
ownerProducer=”USA”
SCIcontrols=”SI-G”
disseminationControls=”OC REL”
releasableTo=”USA AUS GBR”
declassDate=”2010-05-20”
	Security Banner
	TOP SECRET//**COMINT-GAMMA**//ORCON/REL TO USA, AUS, GBR//20100520

classification=”TS”
ownerProducer=”USA”
SCIcontrols=”SI-G”
disseminationControls=”OC PR REL”
releasableTo=”USA AUS GBR”
	Portion Mark
	TS//**SI-G**//OC/PR/REL TO USA, AUS, GBR

classification=”TS”
ownerProducer=”USA”
SCIcontrols=”SI-ECI-ABC”
	Portion Mark
	TS//**SI-ECI ABC**

7.17.3 Notes

1. When “HCS” is specified in the attribute value, the declassification date field of a document’s security banners must be “MR”, indicating that manual review is required for declassification of the information.
2. The name tokens shown above in the controlled vocabulary for attribute **SCIcontrols** do not include classified values. The classified tokens may be appended to the controlled vocabulary by organizations requiring their use. At a later date a classified registry most likely will maintain these values, but that had not yet been determined at the time of this publication.
3. In the SI-ECI-XXX name token, “XXX” is a placeholder for a three-letter alphabetic ECI designator. The stored values will include the actual ECI designator. For purposes of illustration, the following examples provide guidance in their usage:

   SCIcontrols=“SI-ECI-ABC”
4. However, the portion mark using the example above is rendered and displayed as follows:

   //SI-ECI ABC
5. Multiple values for SI-ECI are stored as follows:

   SCIcontrols=“SI-ECI-ABC SI-ECI-DEF SI-ECI-GHI”

6. However, the portion marking using this example is rendered and displayed as follows:

    //SI-ECI ABC-ECI DEF-ECI GHI

7.18 typeOfExemptedSource

This attribute is used primarily at the product level to specify a marking of a source document that causes the current document to be exempted from automatic declassification. It is manifested only in the "Declassify On" line of a document's classification/declassification block.

7.18.1 Authorized Values

Value	Description
OADR	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "Originating Agency's Determination Required" or "OADR"
X1	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "X1"
X2	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "X2"
X3	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "X3"
X4	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "X4"
X5	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "X5"
X6	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "X6"
X7	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "X7"
X8	Used when a document is classified derivatively either from a source document(s) or a classification guide that contains the declassification instruction "X8"

7.18.2 Examples

XML Markup	Display Values
typeOfExemptedSource="OADR" dateOfExemptedSource="1990-10-20"	**Classification/Declassification Block** Declassify On: Source Marked "**OADR**", Date of Source: 19901020
typeOfExemptedSource="X1 X2" dateOfExemptedSource="2000-10-20"	**Classification/Declassification Block** Declassify On: Source Marked "**X1 X2**", Date of Source: 20001020

7.18.3 Notes

1. When this attribute is used, attribute **dateOfExemptedSource** must also be used.
2. When this attribute is used, the declassification date field of the current document's security banners must be "MR", indicating that manual review is required for declassification of the information in the current document.

Appendix A — Points of Contact

Name	Position	Contact Information
Send comments and suggestions about this guide to:		
Karen Stevens	Secretariat, IC MWG	+1 (703) 874-8264 karen.h.stevens@saic.com (unclassified) stevnsk@cia.ic.gov (IC E-MAIL)

Appendix B — References

1. Intelligence Community, Community Management Staff, Controlled Access Programs Coordination Office, *Authorized Classification and Control Markings Register*. (See CAPCO home page on Intelink.)

2. Intelligence Community, Community Management Staff, Controlled Access Programs Coordination Office, *Authorized Classification and Control Markings Implementation Manual*. (See CAPCO home page on Intelink.)

3. Intelligence Community Metadata Working Group, *CISS ISM Data Element Dictionary*, Version 1.0, 15 February 2006. Available at “http:www.imd.ic.gov/ICML/” on JWICS; at “http://www.imd.ismc.sgov.gov/ICML/” on SIPRNet; at “http://www.ismc.us.qlat/ICML/” on Stone Ghost; at “https://www.icmwg.org/ic_icml/” on the Internet; and as information resource “CISS_ISM_DED” in the DoD XML Registry and IC XML Registry.

4. U.S. National Archives and Records Administration, Information Security Oversight Office, *Classified National Security Information Directive No. 1*, October 30, 2003.

5. World Wide Web Consortium, W3C Recommendation, *Extensible Markup Language (XML) 1.1*, 4 April 2004.

6. World Wide Web Consortium, W3C Recommendation, *Namespaces in XML 1.1*, 4 April 2004.

7. World Wide Web Consortium, W3C Recommendation, *Extensible Stylesheet Language (XSL)*, Version 1.0, W3C Recommendation, 15 October 2001.

8. World Wide Web Consortium, W3C Recommendation, *XSL Transformations (XSLT)*, Version 1.0, 16 November 1999.

Appendix C — Change History

Version	Date	Purpose
1.0	2006-02-15	Initial release

Appendix D — Sample Domain Value Document

Each of the controlled vocabularies used with the CISS ISM attributes is represented by a domain value document in the XML Registry. This appendix contains the domain value document for the non-IC markings controlled vocabulary. This is the format in which the vocabulary is available from the DoD XML Registry. The information resource name for this file in the XML Registry is “INTnonICmarkings2004-04-30”.

```
<?xml version=”1.0” encoding=”utf-8”?>
<!DOCTYPE DomainValueSet SYSTEM
 ”http://diides.ncr.disa.mil/xmlreg/DTD/registry_domain_values.dtd”>

<DomainValueSet>

<ReferenceSetId/>
<EffectiveDate>2004-04-30</EffectiveDate>
<SecurityClassification>UNCLASSIFIED</SecurityClassification>
<Definition>Information security classification markings for
 classified information originating from non-intelligence
 components of the US Department of Defense or the US
 Department of Energy</Definition>

<Namespace>INT</Namespace>
<InformationResourceName>
INTnonICmarkings2004-04-30
</InformationResourceName>
<InformationResourceVersion>
2004-04-30
</InformationResourceVersion>

<DomainValues>

<DomainValue security_classification=”Unclassified”>
<KeyValue>SC</KeyValue>
<Description>SPECIAL CATEGORY</Description>
<NonKeyValue>SPECAT</NonKeyValue>
</DomainValue>

<DomainValue security_classification=”Unclassified”>
<KeyValue>SIOP</KeyValue>
<Description>SINGLE INTEGRATED OPERATIONS PLAN-EXTREMELY
 SENSITIVE INFORMATION</Description>
<NonKeyValue>SIOP-ESI</NonKeyValue>
</DomainValue>

<DomainValue security_classification=”Unclassified”>
<KeyValue>SINFO</KeyValue>
<Description>SENSITIVE INFORMATION</Description>
</DomainValue>

<DomainValue security_classification=”Unclassified”>
<KeyValue>DS</KeyValue>
<Description>LIMITED DISTRIBUTION</Description>
<NonKeyValue>LIMDIS</NonKeyValue>
```

```
</DomainValue>

<DomainValue security_classification=”Unclassified”>
<KeyValue>XD</KeyValue>
<Description>EXCLUSIVE DISTRIBUTION</Description>
<NonKeyValue>EXDIS</NonKeyValue>
</DomainValue>

<DomainValue security_classification=”Unclassified”>
<KeyValue>ND</KeyValue>
<Description>NO DISTRIBUTION</Description>
<NonKeyValue>NODIS</NonKeyValue>
</DomainValue>

<DomainValue security_classification=”Unclassified”>
<KeyValue>SBU</KeyValue>
<Description>SENSITIVE BUT UNCLASSIFIED</Description>
</DomainValue>

<DomainValue security_classification=”Unclassified”>
<KeyValue>SBU-NF</KeyValue>
<Description>SENSITIVE BUT UNCLASSIFIED NOFORN</Description>
<NonKeyValue>SBU NOFORN</NonKeyValue>
</DomainValue>

<DomainValue security_classification=”Unclassified”>
<KeyValue>LES</KeyValue>
<Description>LAW ENFORCEMENT SENSITIVE</Description>
</DomainValue>

</DomainValues>
</DomainValueSet>
```