



# **Guide to Schemas for ISMCAT**

---

## **ISMCAT Schema Guide**

**Version 2022-NOV**

December 1, 2022

Distribution Notice:

This document has been approved for Public Release and is available for use without restriction.

## Table of Contents

Chapter 1 - Introduction .....	1
1.1 - Purpose .....	1
Chapter 2 - Schema Files .....	2
2.1 - SchemaGuideSchema.xsd .....	2
2.2 - Tetragraph.xsd .....	5

**Chapter 1 - Introduction**

**1.1 - Purpose**

This is an informative supplement for ISMCAT. This guide is generated from the ISMCAT Schemas and provides a consolidated reference for the schemas of this specification.

Chapter 2 - Schema Files

2.1 - SchemaGuideSchema.xsd

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
            xmlns:xhtml="http://www.w3.org/1999/xhtml-StopBrowserRendering"
            attributeFormDefault="qualified"
            ism:DESVersion="202111"
            ism:createDate="2011-09-19"
            ism:resourceElement="true"
            ism:classification="U"
            ism:ISMCATCESVersion="202205"
            ism:compliesWith="USGov USIC"
            ism:ownerProducer="USA"
            version="202211"
            elementFormDefault="qualified"
            targetNamespace="urn:schema:guide:schema:ismcat"
            xml:lang="en">
  <xsd:annotation>
    <xsd:documentation>
      <xhtml:h1 ism:ownerProducer="USA" ism:classification="U">Intelligence Community
Technical Specification CVE Encoding Specification for ISM Country Codes and Tetragraphs (ISMCAT.CES)
SchemaGuide</xhtml:h1>
    </xsd:documentation>

    <xsd:documentation>
      <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Notices</xhtml:h2>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U"> Distribution Notice:
This document has been approved for Public Release and is available for use without restriction.

    </xhtml:p>
    </xsd:documentation>
    <xsd:documentation>
      <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Description</xhtml:h2>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U"> W3C XML Schema used to
facilitate generation of the SchemaGuide for the Data Encoding Specification for
CVE Encoding Specification for ISM Country Codes and Tetragraphs (ISMCAT.CES). </xhtml:p>
    </xsd:documentation>
    <xsd:documentation>
      <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Introduction</xhtml:h2>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U"> This Schema file is only
used to produce the schemaGuide for the CVE Encoding Specification (CES).
Please see the document titled <xhtml:i>
      <xhtml:a href="../../Documents/ISMCAT/CesISMCATXml.pdf">CVE Encoding Specification
for ISM Country Codes and Tetragraphs</xhtml:a>
      </xhtml:i> for a complete description of the encoding as well as list of all
components. </xhtml:p>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">It is envisioned that this
schema or its components, as well as other parts of the CES may be overridden for
localized implementations. Therefore, permission to use, copy, modify and distribute
this Schema and the other parts of the CES for any purpose is hereby granted in
perpetuity. </xhtml:p>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U">Please reference the preceding
```

two paragraphs in all copies or variations. The developers make no representation about the suitability of the schema or CES for any purpose. It is provided "as is" without expressed or implied warranty. </xhtml:p>

<xhtml:p ism:ownerProducer="USA" ism:classification="U">If you modify this Schema in any way label your schema as a variant of ISMCAT.CES. </xhtml:p>

<xhtml:p ism:ownerProducer="USA" ism:classification="U"> Please direct all questions, bug reports, or suggestions for changes to the points of contact identified in the document referenced above. </xhtml:p>

</xsd:documentation>  
<xsd:documentation>  
<xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Implementation Notes</xhtml:h2>  
<xhtml:p ism:ownerProducer="USA" ism:classification="U">ISMCAT.CES is a collection of 6 CVEs</xhtml:p>

<xhtml:ul>  
<xhtml:li ism:ownerProducer="USA" ism:classification="U">  
<xhtml:a href="CVCEnumISMCATFGIOpen\_xsd\_Simple\_Type\_ismcatfgio\_CVCEnumISMCATFGIOpen.html#CVCEnumISMCATFGIOpen">CVCEnumISMCATFGIOpen</xhtml:a>  
</xhtml:li>  
<xhtml:li ism:ownerProducer="USA" ism:classification="U">  
<xhtml:a href="CVCEnumISMCATFGIProtected\_xsd\_Simple\_Type\_ismcatfgip\_CVCEnumISMCATFGIProtected.html#CVCEnumISMCATFGIProtected">CVCEnumISMCATFGIProtected</xhtml:a>  
</xhtml:li>  
<xhtml:li ism:ownerProducer="USA" ism:classification="U">  
<xhtml:a href="CVCEnumISMCATOwnerProducer\_xsd\_Simple\_Type\_ismcatownpro\_CVCEnumISMCATOwnerProducer.html#CVCEnumISMCATOwnerProducer">CVCEnumISMCATOwnerProducer</xhtml:a>  
</xhtml:li>  
<xhtml:li ism:ownerProducer="USA" ism:classification="U">  
<xhtml:a href="CVCEnumISMCATRelTo\_xsd\_Simple\_Type\_ismcatrelto\_CVCEnumISMCATRelTo.html#CVCEnumISMCATRelTo">  
CVCEnumISMCATRelTo</xhtml:a>  
</xhtml:li>  
<xhtml:li ism:ownerProducer="USA" ism:classification="U">  
<xhtml:a href="CVCEnumISMCATResponsibleEntity\_xsd\_Simple\_Type\_ismcatre\_CVCEnumISMCATResponsibleEntity.html#CVCEnumISMCATResponsibleEntity">  
CVCEnumISMCATResponsibleEntity</xhtml:a>  
</xhtml:li>  
<xhtml:li ism:ownerProducer="USA" ism:classification="U">  
<xhtml:a href="CVCEnumISMCATTetragraph\_xsd\_Simple\_Type\_ismcattetra\_CVCEnumISMCATTetragraph.html#CVCEnumISMCATTetragraph">  
CVCEnumISMCATTetragraph</xhtml:a>  
</xhtml:li>  
</xhtml:ul>

<xhtml:p ism:ownerProducer="USA" ism:classification="U">ISMCAT.CES also contains the Tetragraph Taxonomy schema (Taxonomy.xsd) for mapping Tetragraphs to their memberships.</xhtml:p>

<xhtml:p ism:ownerProducer="USA" ism:classification="U">An ISMCAT.CES Taxonomy instance is an instance starting with the Tetragraphs root element:</xhtml:p>

<xhtml:ul>  
<xhtml:p ism:ownerProducer="USA" ism:classification="U">A <xhtml:a href="Tetragraph\_xsd\_Element\_tetra\_Tetragraphs.html#Tetragraphs">Tetragraphs</xhtml:a>  
</xhtml:p>  
</xhtml:ul>

</xsd:documentation>  
<xsd:documentation>  
<xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Creators</xhtml:h2>  
<xhtml:p ism:ownerProducer="USA" ism:classification="U">Office of the Director of National Intelligence Community Chief Information Officer</xhtml:p>

</xsd:documentation>  
</xsd:annotation>  
<!-- Import the schema for each "dependent" spec. This schema is only used to generate a SchemaGuide -->

```
<!-- CVEEnumISMCATFGIOpen -->

<xsd:import namespace="urn:us:gov:ic:cvenum:ismcat:fgiopen"
            schemaLocation="./CVEGenerated/CVEEnumISMCATFGIOpen.xsd"/>

    <!-- CVEEnumISMCATRelTo -->

<xsd:import namespace="urn:us:gov:ic:cvenum:ismcat:relto"
            schemaLocation="./CVEGenerated/CVEEnumISMCATRelTo.xsd"/>

    <!-- CVEEnumISMCATOwnerProducer -->

<xsd:import namespace="urn:us:gov:ic:cvenum:ismcat:ownerproducer"
            schemaLocation="./CVEGenerated/CVEEnumISMCATOwnerProducer.xsd"/>

    <!-- CVEEnumISMCATFGIProtected -->

<xsd:import namespace="urn:us:gov:ic:cvenum:ismcat:fgiprotected"
            schemaLocation="./CVEGenerated/CVEEnumISMCATFGIProtected.xsd"/>

    <!-- CVEEnumISMCATResponsibleEntity -->

<xsd:import namespace="urn:us:gov:ic:cvenum:ismcat:responsibleentity"
            schemaLocation="./CVEGenerated/CVEEnumISMCATResponsibleEntity.xsd"/>

    <!-- CVEEnumISMCATTetragrph -->

<xsd:import namespace="urn:us:gov:ic:cvenum:ismcat:tetragraph"
            schemaLocation="./CVEGenerated/CVEEnumISMCATTetragraph.xsd"/>

    <xsd:import namespace="urn:us:gov:ic:taxonomy:catt:tetragraph"
            schemaLocation="Tetragraph.xsd"/>

</xsd:schema>
```

2.2 - Tetragraph.xsd

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
            xmlns:arh="urn:us:gov:ic:arh"
            xmlns:xhtml="http://www.w3.org/1999/xhtml-StopBrowserRendering"
            xmlns:tetra="urn:us:gov:ic:taxonomy:catt:tetragraph"
            xmlns:tax="urn:us:gov:ic:taxonomy:common"
            xmlns:ismcatrelto="urn:us:gov:ic:cvenum:ismcat:relto"
            xmlns:ismcatre="urn:us:gov:ic:cvenum:ismcat:responsibleentity"
            elementFormDefault="qualified"
            targetNamespace="urn:us:gov:ic:taxonomy:catt:tetragraph"
            ism:compliesWith="USGov USIC"
            ism:resourceElement="true"
            ism:createDate="2019-09-18"
            ism:DESVersion="202111"
            ism:ISMCATCESVersion="202205"
            ism:classification="U"
            ism:ownerProducer="USA"
            version="202211">

    <xs:annotation>
        <xs:documentation>
            <xhtml:h1 ism:ownerProducer="USA" ism:classification="U">Intelligence Community Technical
Specification XML Taxonomy Encoding Specification for Countries and Tetragraphs
(CATT.TES) SchemaGuide</xhtml:h1>
        </xs:documentation>
        <xs:documentation>
            <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Notices</xhtml:h2>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U"> Distribution Notice:
This document has been approved for Public Release and is available for use without restriction.
        </xhtml:p>
        </xs:documentation>
        <xs:documentation>
            <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Description</xhtml:h2>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U"> W3C XML Schema used to facilitate
generation of the SchemaGuide for the XML Taxonomy Encoding Specification for Countries
and Tetragraphs (CATT.TES). </xhtml:p>
        </xs:documentation>
        <xs:documentation>
            <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Introduction</xhtml:h2>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U"> This XML Schema file is only used
to produce the schemaGuide for the XML CVE Encoding Specification (CES). Please see the
document titled <xhtml:i>
                <xhtml:a href="../../Documents/ISMCAT/CesISMCATXml.pdf">XML CVE Encoding
Specification for ISM Country Codes and Tetragraphs</xhtml:a>
            </xhtml:i> for a complete description of the encoding as well as list of all components. </xhtml:p>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U"> It is envisioned that this schema
or its components, as well as other parts of the CES may be overridden for localized
implementations. Therefore, permission to use, copy, modify and distribute this XML
Schema and the other parts of the CES for any purpose is hereby granted in perpetuity. </xhtml:p>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U"> Please reference the preceding two
paragraphs in all copies or variations. The developers make no representation about the
suitability of the schema or TES for any purpose. It is provided "as is" without
expressed or implied warranty. </xhtml:p>
```



```

        <xhtml:p ism:ownerProducer="USA" ism:classification="U"> If you modify this XML Schema in
any way label your schema as a variant of ISMCAT.CES.</xhtml:p>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U"> Please direct all questions, bug
reports, or suggestions for changes to the points of contact identified in the document
referenced above. </xhtml:p>
    </xs:documentation>
    <xs:documentation>
        <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Implementation Notes</xhtml:h2>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">An ISMCAT.CES Taxonomy instance is
an instance starting with the Tetragraphs root element:</xhtml:p>
        <xhtml:ul>
            <xhtml:p ism:ownerProducer="USA" ism:classification="U">A <xhtml:a href="Tetragraph_xsd_Element_tetra_Tetragraphs.html#Tetragraphs">Tetragraphs</xhtml:a>
            </xhtml:p>
        </xhtml:ul>
    </xs:documentation>
    <xs:documentation>
        <xhtml:h2 ism:ownerProducer="USA" ism:classification="U">Creators</xhtml:h2>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">Office of the Director of National
Intelligence Intelligence Community Chief Information Officer</xhtml:p>
    </xs:documentation>
</xs:annotation>

<xs:import namespace="urn:us:gov:ic:arh" schemaLocation="../../ISM/IC-ARH.xsd"/>
<xs:import namespace="urn:us:gov:ic:ism" schemaLocation="../../ISM/IC-ISM.xsd"/>
<xs:import namespace="urn:us:gov:ic:taxonomy:common"
schemaLocation="../../Taxonomy/Taxonomy.xsd"/>

<xs:import namespace="urn:us:gov:ic:cvenum:ismcat:relto"
schemaLocation="../../ISMCAT/CVEGenerated/CVEnumISMCATrElTo.xsd"/>
<xs:import namespace="urn:us:gov:ic:cvenum:ismcat:responsibleentity"
schemaLocation="../../ISMCAT/CVEGenerated/CVEnumISMCATrEsponsibleEntity.xsd"/>

<xs:element name="Tetragraphs">
    <xs:annotation>
        <xs:documentation>
            <xhtml:p ism:classification="U" ism:ownerProducer="USA">This element holds the list of
Tetragraphs and their mappings.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="arh:Security"/>
            <xs:element ref="tax:IRM"/>
            <xs:element ref="tetra:Tetragraph" maxOccurs="unbounded" minOccurs="1"/>
        </xs:sequence>
        <xs:attribute ref="tetra:TESVersion" use="required"/>
    </xs:complexType>
</xs:element>

<xs:element name="Tetragraph">
    <xs:annotation>
        <xs:documentation>
            <xhtml:p ism:classification="U" ism:ownerProducer="USA">This element group captures the
countries that are associated with the tetragraph specified.</xhtml:p>
        </xs:documentation>
    </xs:annotation>
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="tetra:Country" maxOccurs="unbounded" minOccurs="1"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>

```

```

    </xs:documentation>
  </xs:annotation>
</xs:complexType>
<xs:sequence>
  <xs:element ref="tetra:TetraToken"/>
  <xs:element name="TetraDescription" type="ism:LongStringWithSecurityType">
    <xs:annotation>
      <xs:documentation>
        <xhtml:p ism:classification="U" ism:ownerProducer="USA">The act, process, or
technique of describing the tetragraph. </xhtml:p>
      </xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element name="Notes" type="ism:LongStringWithSecurityType" minOccurs="0">
    <xs:annotation>
      <xs:documentation>
        <xhtml:p ism:classification="U" ism:ownerProducer="USA">A brief record, comment
or explanation. </xhtml:p>
      </xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:element ref="tetra:Membership"/>
</xs:sequence>
<xs:attribute name="decomposable" use="required" type="tetra:DecomposableType">
  <xs:annotation>
    <xs:documentation>
      <xhtml:p ism:classification="U" ism:ownerProducer="USA">Capable of being resolved
into constituent elements. </xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:attribute>
<xs:attribute name="deprecated" use="optional" type="xs:date">
  <xs:annotation>
    <xs:documentation>
      <xhtml:p ism:classification="U" ism:ownerProducer="USA">To mark (a component of a
software standard) as obsolete to warn against its use in the future so that it
may be phased out. </xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:attribute>
<xs:attributeGroup ref="ism:SecurityAttributesGroup"/>
</xs:complexType>
</xs:element>

<xs:simpleType name="DecomposableType">
  <xs:annotation>
    <xs:documentation>
      <xhtml:p ism:ownerProducer="USA" ism:classification="U"> Decomposition is the breaking
down of a tetragraph into its component countries for the purposes of rollup. An
example is decomposing FVEY into the five member countries. This decomposition allows
a portion marked RELEASABLE TO USA, GBR and another portion marked RELEASEABLE TO
USA, FVEY to rollup to RELEASABLE TO USA, GBR. If FVEY was not decomposable the
rollup would have to have been NF. NA is "Not Applicable" and is applied to
deprecated tetragraphs. </xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:simpleType>

```

```
        </xs:documentation>
      </xs:annotation>
      <xs:restriction base="xs:NMTOKEN">
        <xs:enumeration value="Yes"/>
        <xs:enumeration value="No"/>
        <xs:enumeration value="NA"/>
      </xs:restriction>
    </xs:simpleType>

    <xs:element name="TetraToken">
      <xs:annotation>
        <xs:documentation>
          <xhtml:p ism:classification="U" ism:ownerProducer="USA">The Tetragraph token for which
this grouping relates.</xhtml:p>
        </xs:documentation>
      </xs:annotation>
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="ismcatrelto:CVEnumISMCARelTo">
            <xs:attributeGroup ref="ism:SecurityAttributesGroup"/>
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>

    <xs:element name="Membership">
      <xs:annotation>
        <xs:documentation>
          <xhtml:p ism:classification="U" ism:ownerProducer="USA">A list of countries that have
membership in or association with the tetragraph.</xhtml:p>
        </xs:documentation>
      </xs:annotation>
      <xs:complexType>
        <xs:choice>
          <xs:choice maxOccurs="unbounded">
            <xs:element maxOccurs="1" ref="tetra:Country" minOccurs="1"/>
            <xs:element maxOccurs="1" minOccurs="1" ref="tetra:Organization"/>
          </xs:choice>
          <xs:element name="Description" type="ism:LongStringWithSecurityType">
            <xs:annotation>
              <xs:documentation>
                <xhtml:p ism:classification="U" ism:ownerProducer="USA">The act, process, or
technique of describing. </xhtml:p>
              </xs:documentation>
            </xs:annotation>
          </xs:element>
          <xs:element name="MembershipSupressed" minOccurs="1" maxOccurs="1">
            <xs:annotation>
              <xs:documentation>
                <xhtml:p ism:classification="U" ism:ownerProducer="USA">A tetragraph whose
membership cannot be separated into its constituent countries for the
purposes of rolling up portion markings into an overall classification
banner for a document or data file.</xhtml:p>
              </xs:documentation>
            </xs:annotation>
          </xs:element>
        </xs:choice>
      </xs:complexType>
    </xs:element>
```

```

        </xs:annotation>
      </xs:element>
    </xs:choice>
    <xs:attribute name="dateLastVerified" use="required" type="xs:date">
      <xs:annotation>
        <xs:documentation>
          <xhtml:p ism:classification="U" ism:ownerProducer="USA">The date the tetragraph's
membership was last checked against the authoritative source. </xhtml:p>
        </xs:documentation>
      </xs:annotation>
    </xs:attribute>
    <xs:attributeGroup ref="ism:SecurityAttributesGroup"/>
  </xs:complexType>
</xs:element>
<xs:element name="Country" type="ismcatre:CVEEnumISMCAResponsibleEntity">
  <xs:annotation>
    <xs:documentation>
      <xhtml:p ism:classification="U" ism:ownerProducer="USA">The country code of a member of
the tetragraph. </xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>
<xs:element name="Organization" type="ismcatrelto:CVEEnumISMCARelTo">
  <xs:annotation>
    <xs:documentation>
      <xhtml:p ism:classification="U" ism:ownerProducer="USA">The code for an organization
that is a member of the tetragraph. </xhtml:p>
    </xs:documentation>
  </xs:annotation>
</xs:element>

  <xs:attribute name="TESVersion">
    <xs:annotation>
      <xs:documentation>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">The version number of the
specification. This attribute is intended for processing systems to determine the
appropriate versions of Schema, Schematron, and CVE values for validation and
interpretation of an instance document. </xhtml:p>
        <xhtml:p ism:ownerProducer="USA" ism:classification="U">If there are multiple of this
attribute specified in an instance document, the first one in document order is the
one that will apply to the entire document. Document order is defined in <xhtml:a href="https://www.w3.org/TR/xpath-datamodel/#document-order">https://www.w3.org/TR/xpath-
datamodel/#document-order</xhtml:a>
        </xhtml:p>
      </xs:documentation>
    </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:pattern value="[0-9]{6}(\.[0-9]{6})?(\-\.{1,23})?" />
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>

</xs:schema>

```