



TECHNICAL INTEROPERABILITY STANDARD

For E-Documents.



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13169 *Resolution of the Secretary of State for Public Service, of 19 July 2011, giving approval to the Technical Interoperability Standard for E-Documents.*

The National Interoperability Framework, established in Article 42, Section 1, of Law 11/2007, of 22 June, on Citizens' E-Access to Public Services, is aimed at creating the conditions necessary to guarantee an adequate level of technical, semantic and organisational interoperability of the systems and applications used in the Public Administration, allowing the exercise of rights and the fulfilment of obligations through e-access to public services, while acting in the interest of effectiveness and efficiency.

Royal Decree 4/2010, of 8 January, regulating the National Interoperability Framework for E-Government, establishes in Additional Provision 1 the development of a series of Technical Interoperability Standards, which must be complied with in the Public Administration.

The Technical Interoperability Standards describe specific aspects of a wide range of topics such as e-documents, digitisation, e-files, authentic copy and conversion, signature policy, standards, data brokerage, data models, e-document management, connection to the communication network of the Spanish Public Administration, and data models for the exchange of registry entries and declarations of conformity, all of which are necessary to guarantee the more practical and operational aspects of interoperability between Public Administration agencies and citizens. The Technical Operability Standards shall be further developed and improved over time, parallel to the progress of e-government services, their supporting infrastructure, and the evolution of technology, in order to meet the provision in Article 42.3 of Law 11/2007, of 22 June.

Within the Technical Interoperability Standards, those related to e-documents, e-files, the digitisation of paper documents, authentic copy and conversion procedures, and e-document management policy are in accordance with the provisions in the aforementioned Royal Decree 4/2010, of 8 January, on the Interoperability, Retrieval and Preservation of E-Documents, in light of the need to guarantee these aspects for e-documents throughout their lifecycle.

In particular, the Technical Interoperability Standard for E-Documents describes e-documents, including contents, e-signatures, and minimum required metadata, and the rules to exchange and copy them. For e-document management and preservation issues, this Standard cross-references to the Technical Interoperability Standard for E-Document Management Policy. Finally, the Annex to this Resolution contains a detailed definition of the minimum required metadata, XML schemas for document exchange, and basic information on the signature of e-documents. In this regard, the e-document structure as defined in this Standard allows the use of e-signatures as envisaged in the Commission Decision 2011/130/EU, of February 25, 2011, establishing minimum requirements for the cross-border processing of documents signed electronically by competent authorities under Directive 2006/123/EC of the European Parliament and of the Council on services in the internal market.

Drafted in collaboration with all the Public Administration agencies to which it applies, the present Technical Standard has received a favourable report from the Standing Committee of the High Council for E-Government, at the proposal of the E-Government Sector Committee.

In accordance with the provisions in Section 2 of Additional Provision 1 of Royal Decree 4/2010, of 8 January, the Secretary of State decides:

One

To approve the Technical Interoperability Standard for E-Documents whose text appears below.

Two

That the Technical Interoperability Standard for E-Documents that is being approved by virtue of this document shall come into force on the day following its publication in the Official State Gazette, irrespective of the clauses in Transitory Provision 1 of Royal Decree 4/2010, of 8 January, regulating the National Interoperability Framework for E-Government.

Madrid, 19 July, 2011. Secretary of State for Public Service María Consuelo Rumí Ibáñez.

TECHNICAL INTEROPERABILITY STANDARD FOR E-DOCUMENTS

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I. Purpose

The Technical Interoperability Standard for E-Documents is intended to set forth the components of e-documents, including their contents, e-signature, and metadata, as well as the structures and formats required for e-document exchange.

II. Scope of application

This standard shall apply to e-documents within the scope established in Article 3 of Royal Decree 4/2010, of 8 January, regulating the National Interoperability Framework for E-Government.

- a) Administrative e-documents.

- b) Other e-documents that could become part of an e-file.

III. Components of e-documents.

The components of e-documents are:

- a) Contents, understood as the document's set of data or information.
- b) When relevant, e-signature.
- c) Metadata.

IV. Signature e-documents

All administrative e-documents, as well as other e-documents that could become part of an e-file, will have at least one e-signature attached, in compliance with the regulations in force.

V. Metadata of e-documents

V.1 The minimum required metadata of e-documents:

- a) Shall be those in Annex I.
- b) Shall be included in every e-document exchange between agencies in the Public Administration and public law entities associated or reporting to it, and between such agencies or entities and citizens.
- c) Shall not be altered at any stage of the administrative procedures, except for changes that need to be introduced to correct errors or omissions in the values originally assigned.

V.2 Complementary metadata can be added in response to special description needs.

When necessary, complementary metadata shall be applied in compliance with the provisions in the Technical Interoperability Standard for E-Document Management Policy.

V.3 Every agency in the Public Administration or public law entity associated or reporting to it shall apply the metadata of e-documents within their scope of operation for internal management or handling. Likewise, they shall guarantee the availability of the metadata, preserving the relations between each document and its metadata at all times.

VI. Format of e-documents

VI.1 E-document content files shall have the formats set forth in the Technical Interoperability Standard for Catalogue of Standards.

VI.2 The choice of format shall depend on the type of information being handled, with attention to the purpose each format has been established for.

VI.3 Other formats can be used when special characteristics make them necessary or when they are required to preserve a document's value as proof or its reliability as e-evidence of activities or procedures in case of format conversion.

VII. Exchange of e-documents

VII.1 Every e-document being exchanged shall have the components described in Section III of this Standard.

VII.2 The exchange of e-documents shall consist in sending them with the structure defined in Annex II, irrespective of the application of other structures as regulated in the relevant regulations.

VII.3 As an exception, other structures can be used to exchange e-documents between Public Administration agencies if the parties have agreed on such structures beforehand. In any case, e-documents that must be sent to third parties must be converted to the structure defined in Annex II.

VII.4 For the exchange e-documents between Public Administration agencies in automated processes:

- a) The Public Administration communication network should preferably be used as the means of document transfer.
- b) If the e-document is part of a registry entry, it shall be treated as an attachment to the exchange data message, in compliance with the Technical Interoperability Standard for Data Models for the Exchange of Registry Entries.

VII.5 In case of e-document exchanges between Public Administration agencies involving the transfer of permanent document management responsibilities, the transferor shall check the document's authenticity and integrity at the moment when the exchange takes place.

VIII. Access to e-documents

When Public Administration agencies give access to e-documents at their e-offices or the enabled communication channels, they shall show:

- a) E-document contents when they can be shown in compliance with the regulations on formats in Section VI of this Standard.
- b) The basic information on each of the e-signatures as defined in Annex III.
- c) A description of the minimum required metadata and the values assigned to them.

ANNEXES

ANNEX I

Minimum required metadata of e-documents

1. In the table, repeatability refers to the metadata accompanying a document in an exchange, irrespective of other metadata assigned, management internally by each Public Administration in compliance with the Technical Interoperability Standard for E-document Management Policies.
 2. E-document identifier encoding:

2. E-document identifier encoding:
<Body>: See encoding of "Body" metadata. If there is more than one body, the nine corresponding characters shall be agreed upon by the parties to ensure identifier uniqueness, which is their only purpose.

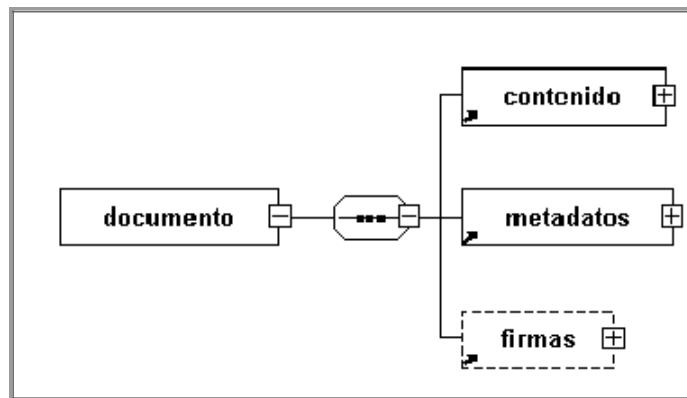
<AAAAA>: E-document capture year (4 characters).

<Specific_ID> Alphanumeric code uniquely identifies

`<Specimen_ID>`: Alphanumeric code uniquely identifying the document among those created by the relevant Public Administration agency. Each agency can design its own generation process according to its own needs as long as it ensures uniqueness. Therefore, this ID can be generated sequentially in a sequence or by a replica of the ID used internally (30 characters).

ANNEX II
XML schemas for e-document exchange

1. E -document XSD



Legend:

Documento: document

contenido: contents

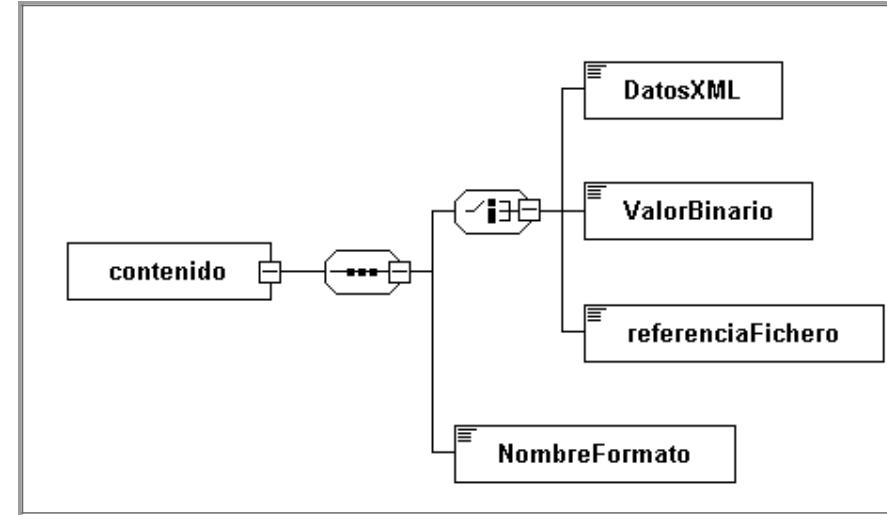
metadatos: metadata

firmas: signatures

```
<?xml version="1.0" encoding="UTF -8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:enids="http://administracionelectronica.gob.es/ENI/XSD/v1.0/firma"
  xmlns:enidocmeta="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/metadatos"
  xmlns:enifile="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/contenido"
  xmlns:enidoc="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e"
  targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xsd:annotation>
    <xsd:documentation xml:lang="es"> DOCUMENT XSD ENI (v1.0)</xsd:documentation>
  </xsd:annotation>
  <xsd:import namespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/metadatos" schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/metadatos/metadatosDocumentoEni.xsd"/>
  <xsd:import namespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/firma" schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/firma/firmasEni.xsd"/>
  <xsd:import namespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/contenido" schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/contenido/contenidoDocumentoEni.xsd"/>
  <xsd:element name="documento" type="enidoc:TypeDocument">
    <xsd:annotation>
      <xsd:documentation xml:lang="es">The element "documento" can appear as the root element in another XML being exchanged or a non-root element (child element).</xsd:documentation>
    </xsd:annotation>
  </xsd:element>
  <xsd:complexType name="TypeDocument">
```

```
<xsd:sequence>
  <xsd:element ref="enifile:content"/>
  <xsd:element ref="enidocmeta:metadata"/>
  <xsd:element ref="enids:signatures" minOccurs="0" maxOccurs="1">
    <xsd:annotation>
<xsd:documentation xml:lang="es">Signatures are mandatory for administrative e-documents and for any e-document to be added to an e-file.</xsd:documentation>
    </xsd:annotation>
```

```
</xsd:element>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
</xsd:schema>
```



2. contents XSD

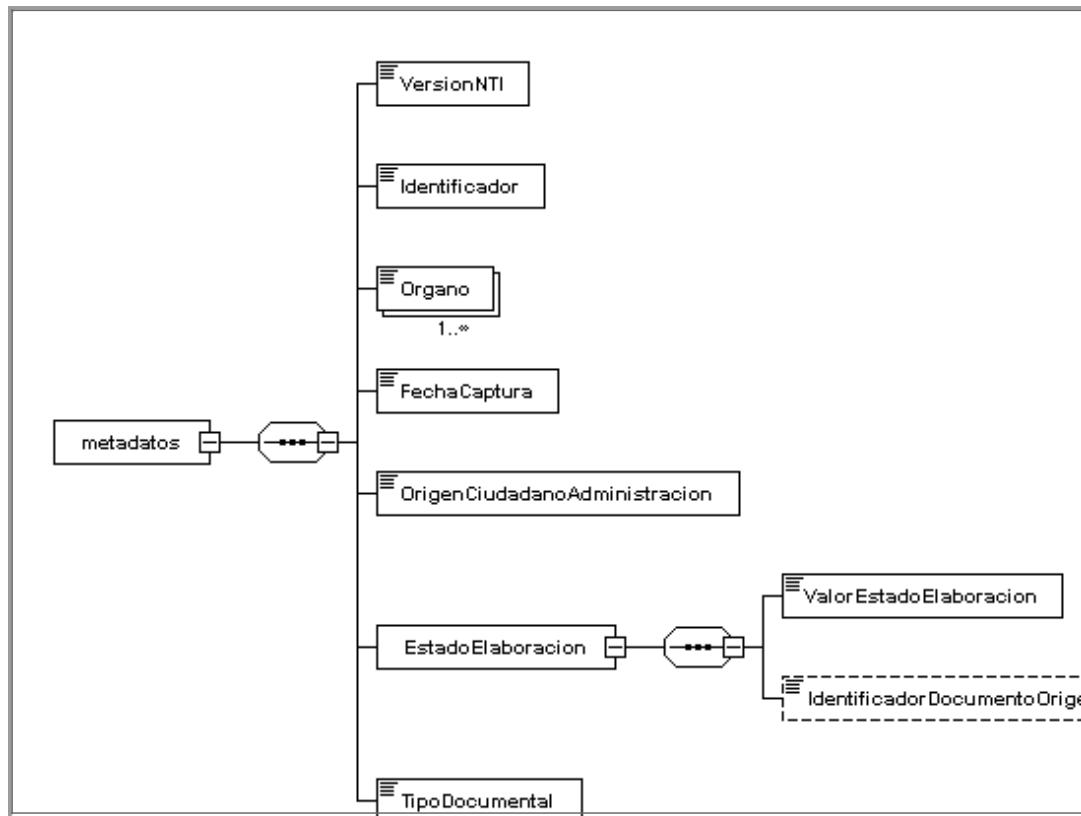
Legend:

Contenidos: Contents
DatosXML: XMLData
ValorBinario: BinaryValue
referenciaFichero: FileReference
NombreFormato: FormatName

```
<?xml version="1.0" encoding="UTF -8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:enfile="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/contenido"
  targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/contenido"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xsd:annotation>
    <xsd:documentation xml:lang="es"> DOCUMENT CONTENT XSD ENI (v1.0)</xsd:documentation>
  </xsd:annotation>
  <xsd:element name="content" type="enfile:TipoContenido"/>
  <xsd:complexType name="TypeContent">
    <xsd:sequence>
      <xsd:choice>
        <xsd:element name="XMLData" type="xsd:anyType">
          <xsd:annotation>
            <xsd:documentation xml:lang="es">XML-format contents. For XML data whose encoding is different from the encoding of this root structure, a CDATA clause must be included.</xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="BinaryValue" type="xsd:base64Binary">
          <xsd:annotation>
            <xsd:documentation xml:lang="es">Base64 contents.</xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="FileReferencere" type="xsd:string">
          <xsd:annotation>
            <xsd:documentation xml:lang="es">Internal reference to content file.</xsd:documentation>
          </xsd:annotation>
        </xsd:element>
      </xsd:choice>
      <xsd:element name="FormatName" type="xsd:string">
        <xsd:annotation>
          <xsd:documentation xml:lang="es">The e-document content file format should be in accordance with the Technical Interoperability Standard for Catalogue of Standard.</xsd:documentation>
```

```
</xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
</xsd:schema>
```

3. Metadata XSD



Legend:

Metadatos: metadata
VersionNTI: NTIVersion
Identificador: Identifier
Órgano: Body
FechaCaptura: CaptureDate
OrigenCiudadanoAdministracion: OriginCitizenAdministration
EstadoElaboracion: ProductionStatus
ValorEstadoElaboracion: ProductionStatusValue
IdentificadorDocumentoOrigen: OriginalDocumentIdentifier
TipoDocumental: DocumentType

```
<?xml version="1.0" encoding="UTF -8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:enidocmeta="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/metadatos"
  targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/metadatos"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xsd:annotation>
    <xsd:documentation xml:lang="es"> DOCUMENT METADATA XSD ENI (v1.0)</xsd:documentation>
  </xsd:annotation>
  <xsd:element name="metadata" type="enidocmeta>TypeMetadata"/>
  <xsd:complexType name="TypeMetadata">
    <xsd:sequence>
      <xsd:element name="NTIVersion" type="xsd:anyURI"/>
      <xsd:element name="Identifier" type="xsd:string"/>
      <xsd:element name="Body" type="xsd:string" minOccurs="1" maxOccurs="unbounded"/>
      <xsd:element name="CaptureDate" type="xsd:dateTime"/>
      <xsd:element name="OriginCitizenAdministration" type="xsd:boolean"/>
      <xsd:element name="ProductionStatus" type="enidocmeta>TypeProductionStatus">
        <xsd:annotation>
          <xsd:documentation xml:lang="es">
            - EE01 - Original.
            - EE02 - Authentic e-copy with format conversion.
            - EE03 - Authentic e-copy of paper document.
            - EE04 - Authentic partial e-copy.
            - EE99 - Others.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
      <xsd:element name="DocumentType" type="enidocmeta:DocumentType">
        <xsd:annotation>
          <xsd:documentation xml:lang="es">*Decision documents*
            - TD01 - Resolution.
            - TD02 - Agreement.
            - TD03 - Contract.
            - TD04 - Convention.
          </xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>
```

- TD05 - Declaration.
- /*Transmission documents*/
 - TD06 - Communication.
 - TD07 - Notification.
 - TD08 - Publication.
 - TD09 - Acknowledgement of receipt.
- /*Proof documents*/
 - TD10 - Deed.
 - TD11 - Certificate.
 - TD12 - Diligence.
- /*Judgment documents*/
 - TD13 - Report.
- /*Citizen's documents*/
 - TD14 - Request form.
 - TD15 - Report form.
 - TD16 - Submission.
 - TD17 - Appeal.
 - TD18 - Citizen's communication.
 - TD19 - Bill.
 - TD20 - Others.
- /*Others*/
 - TD99 - Others.

</xsd:documentation>

</xsd:annotation>

</xsd:element>

</xsd:sequence>

<xsd:attribute name="Id" type="xsd:ID" use="optional"/>

</xsd:complexType>

<xsd:complexType name=" TypeProductionStatus">

<xsd:sequence>

<xsd:element name="ValueProductionStatus" type="enidocmeta:listProductionStatus"/>

<xsd:element name="OriginalDocumentIdentifier" type="xsd:string" minOccurs="0" maxOccurs="1"/>

</xsd:sequence>

</xsd:complexType>

<!--List of production statuses -->

<xsd:simpleType name=" listProductionStatus">

<xsd:restriction base="xsd:string">

<xsd:enumeration value="EE01"/>

<xsd:enumeration value="EE02"/>

<xsd:enumeration value="EE03"/>

<xsd:enumeration value="EE04"/>

<xsd:enumeration value="EE99"/>

</xsd:restriction>

</xsd:simpleType>

<!--List of document types -->

<xsd:simpleType name="DocumentType">

<xsd:restriction base="xsd:string">

<xsd:enumeration value="TD01"/>

<xsd:enumeration value="TD02"/>

<xsd:enumeration value="TD03"/>

<xsd:enumeration value="TD04"/>

<xsd:enumeration value="TD05"/>

<xsd:enumeration value="TD06"/>

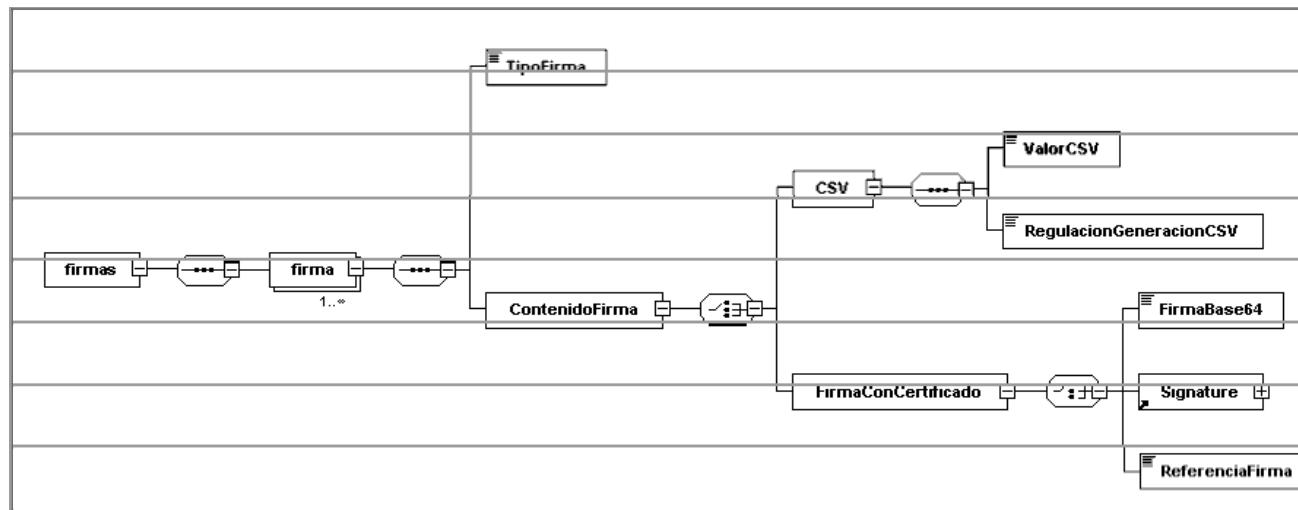
<xsd:enumeration value="TD07"/>

```

<xsd:enumeration value="TD08"/>
<xsd:enumeration value="TD09"/>
<xsd:enumeration value="TD10"/>
<xsd:enumeration value="TD11"/>
<xsd:enumeration value="TD12"/>
<xsd:enumeration value="TD13"/>
<xsd:enumeration value="TD14"/>
<xsd:enumeration value="TD15"/>
<xsd:enumeration value="TD16"/>
<xsd:enumeration value="TD17"/>
<xsd:enumeration value="TD18"/>
<xsd:enumeration value="TD19"/>
<xsd:enumeration value="TD20"/>
<xsd:enumeration value="TD99"/>
</xsd:restriction>
</xsd:simpleType>
</xsd:schema>

```

4. Signatures XSD



Legend:

Firmas: signatures

Firma: signature

TipoFirma: SignatureType

ContenidoFirma: SignatureContent

CSV: CSV

ValorCSV: CSVValue

RegulacionGeneracionCSV: CSVGenerationRegulation

FirmaConCertificado: SignatureWithCertificate

FirmaBase64: Base64Signature

Firma: Signature

ReferenciaFirma: SignatureReference

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:enids="http://administracionelectronica.gob.es/ENI/XSD/v1.0/firma"
  xmlns:ds="http://www.w3.org/2000/09/xmldsig#"
  targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/firma" elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xsd:annotation>
    <xsd:documentation xml:lang="es"> E-SIGNATURES XSD ENI (v1.0)</xsd:documentation>
  </xsd:annotation>
  <xsd:import namespace="http://www.w3.org/2000/09/xmldsig#"
    schemaLocation="http://www.w3.org/TR/xmldsig-core/xmldsig-core-schema.xsd"/>
  <xsd:element name="signatures" type="enids:firmas"/>
  <xsd:complexType name="signatures">
    <xsd:sequence>
      <xsd:element name="signature" type="enids>TypeE-Signatures" minOccurs="1" maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:complexType>
  <xsd:complexType name=" TypeE-Signatures">
    <xsd:sequence>
      <xsd:element name="TypeSignature">
        <xsd:annotation>
          <xsd:documentation xml:lang="es">
```

```

        - TF01 - CSV.
        - TF02 - XAdES internally detached signature.
        - TF03 - XAdES enveloped signature.
        - TF04 - CAdES detached/explicit signature.
        - TF05 - CAdES attached/implicit signature.
        - TF06 - PAdES.

    </xsd:documentation>
</xsd:annotation>
<xsd:simpleType>
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="TF01"/>
        <xsd:enumeration value="TF02"/>
        <xsd:enumeration value="TF03"/>
        <xsd:enumeration value="TF04"/>
        <xsd:enumeration value="TF05"/>
        <xsd:enumeration value="TF06"/>
    </xsd:restriction>
</xsd:simpleType>
</xsd:element>
<xsd:element name="SignatureContent">
<xsd:complexType>
    <xsd:choice>
        <xsd:element name="CSV">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element name="CSVValue" type="xsd:string"/>
                    <xsd:element name="CSVGenerationRegulation" type="xsd:string"/>
                </xsd:sequence>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="SignatureWithCertificate">
            <xsd:complexType>
                <xsd:choice>
                    <xsd:element name="Base64Signature" type="xsd:base64Binary"/>
                    <xsd:element ref="ds:Signature"/>
                    <xsd:element name="SignatureReference">
                        <xsd:annotation>
                            <xsd:documentation xml:lang="es">
                                Internal reference to file containing signature.</xsd:documentation>
                            </xsd:annotation>
                    </xsd:element>
                </xsd:choice>
            </xsd:complexType>
        </xsd:element>
    </xsd:choice>
</xsd:complexType>
</xsd:element>
<xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
<xsd:attribute name="ref" type="xsd:string" use="optional"/>

```

```

<xsd:annotation>
  <xsd:documentation xml:lang="es">It stores the identifier of the node being signed. For multi-node signatures, a separate comma-separated list must be added of the identifiers of the signed nodes.</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
</xsd:complexType>
</xsd:schema>

```

ANNEX III
Basic information on e-document signature

Signature type	Information	Localisation
CSV	Security verification code value.	<i>E-document metadata.</i>
Certificate-based signature	Validity of signature.	<i>In accordance with the signature validation rules in the Technical Interoperability Standard for Signature and Certification Policies in the Public Administration.</i>
	Document signer(s) information (individual, legal entity, or body stamp).	<i>Signature properties or tags.</i>
	Signer(s)' certificate issuer.	<i>Signature properties or tags.</i>
	Date and time of signature(s).	<i>Signature properties or tags.</i>