



# TECHNICAL INTEROPERABILITY STANDARD

For E-Files.



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### III. OTHER PROVISIONS

## MINISTRY OF TERRITORIAL POLICY AND PUBLIC ADMINISTRATION

- 13170** *Resolution of the Secretary of State for Public Service, of 19 July 2011, giving approval to the Technical Interoperability Standard for E-Files.*

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 Interoperability 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-Files describes the structure of e-files, including e-documents, e-indexes, e-signatures, and minimum required metadata, and the specifications to send them and make them available. For e-file management and preservation issues, this Standard cross-references to the Technical Interoperability Standard for E-Document Management Policy. Finally, the Annexes to this Resolution contain a detailed definition of the minimum required metadata and XML schemas for file exchange. In this regard, the e-file structure as defined in this Standard allows the use of e-signatures as envisaged in the Commission Decision 2011/130/EU, of 25 February, 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-Files whose text appears below.

Two

That the Technical Interoperability Standard for E-Files 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-FILES**

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#### **I. Purpose**

The Technical Interoperability Standard for E-Files is intended to establish the structure and format of e-files, as well as the specifications of the services to send them and make them available.

#### **II. Scope of application**

II.1 This standard shall apply to e-files within the scope established in Article 3 of Royal Decree 4/2010, of 8 January, regulating the National Interoperability Framework for E-Government.

II.2 The specifications set forth in this Standard can be applied to other sets of e-documents which, having been created under no regulated procedures, are the result of a series of coherent actions leading to a specific outcome.

#### **III. Components of e-files**

##### **III.1 The components of e-files are:**

a) E-documents, which shall comply with the structure and format specifications in the Technical Interoperability Standard for E-Documents.

E-documents can be part of e-files as independent elements or in folders, the

latter being sets of e-documents created for functional purposes, or as part of another file, embedded in the former.

b) E-indexes which, according to the provisions in Article 32.2 of Law 11/2007, of 22 June, shall guarantee the integrity of e-files and their retrieval whenever necessary.

E-indexes shall contain the whole set of e-documents associated with a file at a given moment and, if necessary, their distribution in folders or files.

c) E-index signature by the Public Administration, body or intervening agency, in accordance with regulations in force.

d) Metadata.

III.2 The addition of an e-file to a document management system shall comply with the provisions in the Technical Interoperability Standard for E-Documents and the Technical Interoperability Standard for E-Document Management Policy.

#### IV. Metadata of e-files

IV.1 The minimum required metadata of e-files:

a) Shall be those in Annex I.

b) Shall be associated during e-file creation for sending e-files and making them available.

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.

IV.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. Exchange of e-files

V.1 The exchange of e-files for sending them or making them available shall consist in sending the structure described in Annex II first, without precluding others set out in the corresponding regulations. Once the structure has been sent, each of the e-documents in the e-file shall be sent in the established order and in compliance with the Technical Interoperability Standard for E-Documents.

V.2 As an exception, other structures can be used to exchange e-files between Public Administration agencies if the parties have agreed on such structures beforehand. In any case, e-files that must be sent to third parties must be converted by the sender to the structure defined in Annex II.

V.3 When the nature or the size of the evidence or documents in the e-file make it difficult to fit in the established structures, a document shall be added specifying which are such documents or evidence. They shall be kept in custody by the managing body and provided separately if required.

V.4 The e-index of the files being exchanged shall at least contain:

a) The date of index creation.

b) For each e-document, the identifier, digital footprint, summary function used to create them in compliance with the provisions in the Technical Interoperability Standard

for Catalogue of Standards, and optionally the date when and the order in which they were added to the file.

c) If relevant, the distribution of documents in folders and the hierarchy of nested files.

V.5 For the exchange of e-files between Public Administration agencies in automated processes:

a) The Public Administration communication network should preferably be used as the means of file transfer.

b) If the e-file 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.

V.6 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.

# **ANNEXES**

## **ANNEX I**

### **Minimum required metadata of e-files**

<sup>1</sup> In the table, repeatability refers only to the metadata accompanying a file in an exchange, irrespective of other metadata assigned and managed internally by each Public Administration agency in compliance with the Technical Interoperability Standard for E-document Management Policies.

## <sup>2</sup> 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.

**<AAAA>**: File creation year (4 characters).

**<Specific\_ID>**: Alphanumeric code uniquely identifying the data according to its own needs as long as it ensures uniqueness.

<sup>3</sup> Metadata encoding when the procedure is not found in SIA:

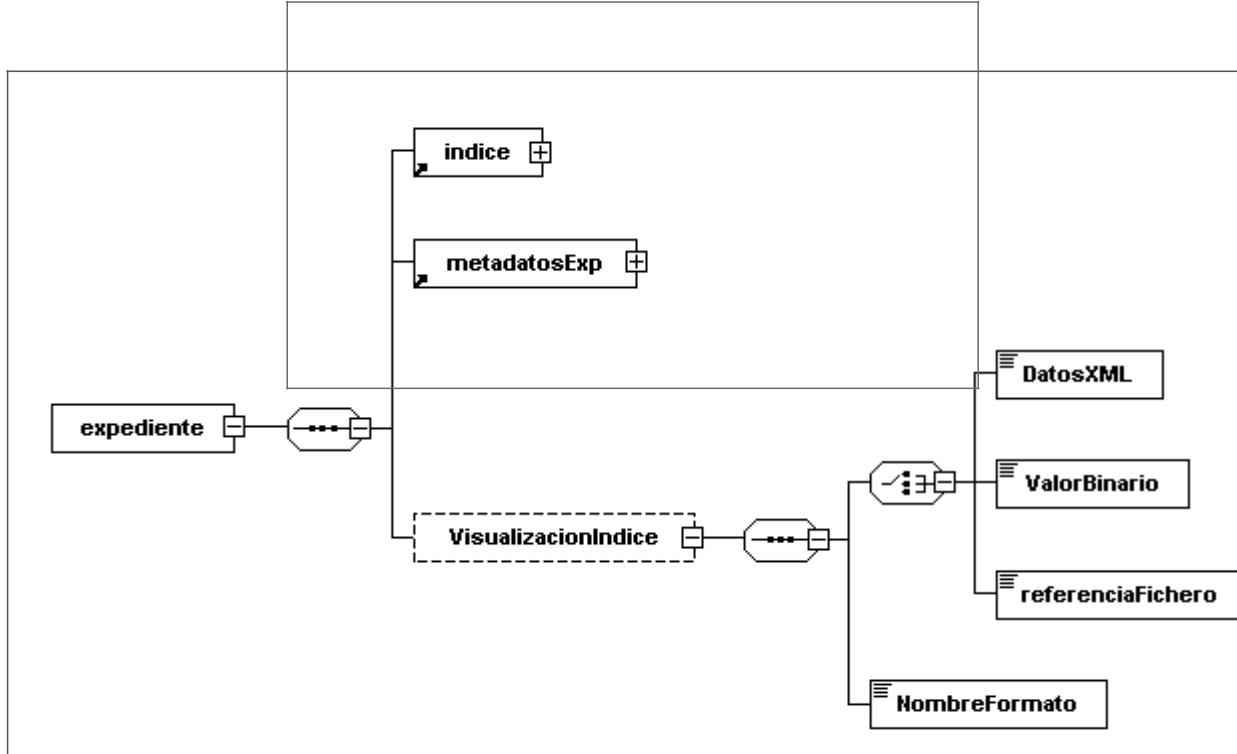
**<Body>**: See encoding of “Body” metadata.

**<Specific\_ID\_PRO>**: 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 in a sequence or be a replica of the ID used internally (30 characters).

Signature type	Indication of the type of signature attached to the document.	1:N	Character string	- CSV. - E-signature formats for e-documents as defined in the <i>Technical Interoperability Standard for Signature and Certification Policies in the Public Administration</i> .
For signature type = CSV				
CSV value	Value of CSV.	1:N	Character string	N/A.
CSV generation definition	Reference to the decree, resolution, or document establishing the creation of the corresponding CSV.	1:N	Character string	For the General Administration (AGE): BOE (Official Spanish Gazette) reference: BOE-A-YYYY-XXXX For others: corresponding reference.

ANNEX II  
XML schemas for e-file exchange

1. E-file XSD



**Legend:**

expediente: file  
indice: index  
metadatosExp: FileMetadata  
VisualizaciónIndice: IndexView  
DatosXML: XMLData  
ValorBinario: BinaryValue  
referenciaFichero: FileReference  
NombreFormato: FormatName

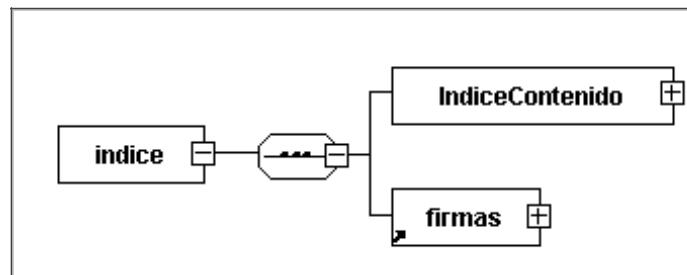
```
<?xml version="1.0" encoding="UTF -8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:eniexpind="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e"
  xmlns:eniexpmeta="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos"
  xmlns:eniexp="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e"
  xmlns.enifile="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/contenido"
```

```
targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e"
elementFormDefault="qualified" attributeFormDefault="unqualified">
<xsd:annotation>
    <xsd:documentation xml:lang="es"> E-FILE XSD ENI (v1.0)</xsd:documentation>
</xsd:annotation>
<xsd:import namespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e" schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/IndiceExpedienteEni.xsd"/>
<xsd:import namespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos" schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos/MetadatosExpedienteEni.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="file" type="eniexp:FileType"/>
<xsd:complexType name=" FileType">
    <xsd:annotation>
        <xsd:documentation>
```

For e-file exchange, first the file's index is sent. Then, the documents contained in the file, one by one, after the distribution in the index contents.

```
</xsd:documentation>
</xsd:annotation>
<xsd:sequence>
  <xsd:element ref="enienxpind:index"/>
  <xsd:element ref="enienxpmeta:metadataExp"/>
  <xsd:element name="IndexView" type="enifile:ContentType" minOccurs="0" maxOccurs="1"/>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
</xsd:schema>
```

## 2. File e-index XSD



### Legend:

Indice: index

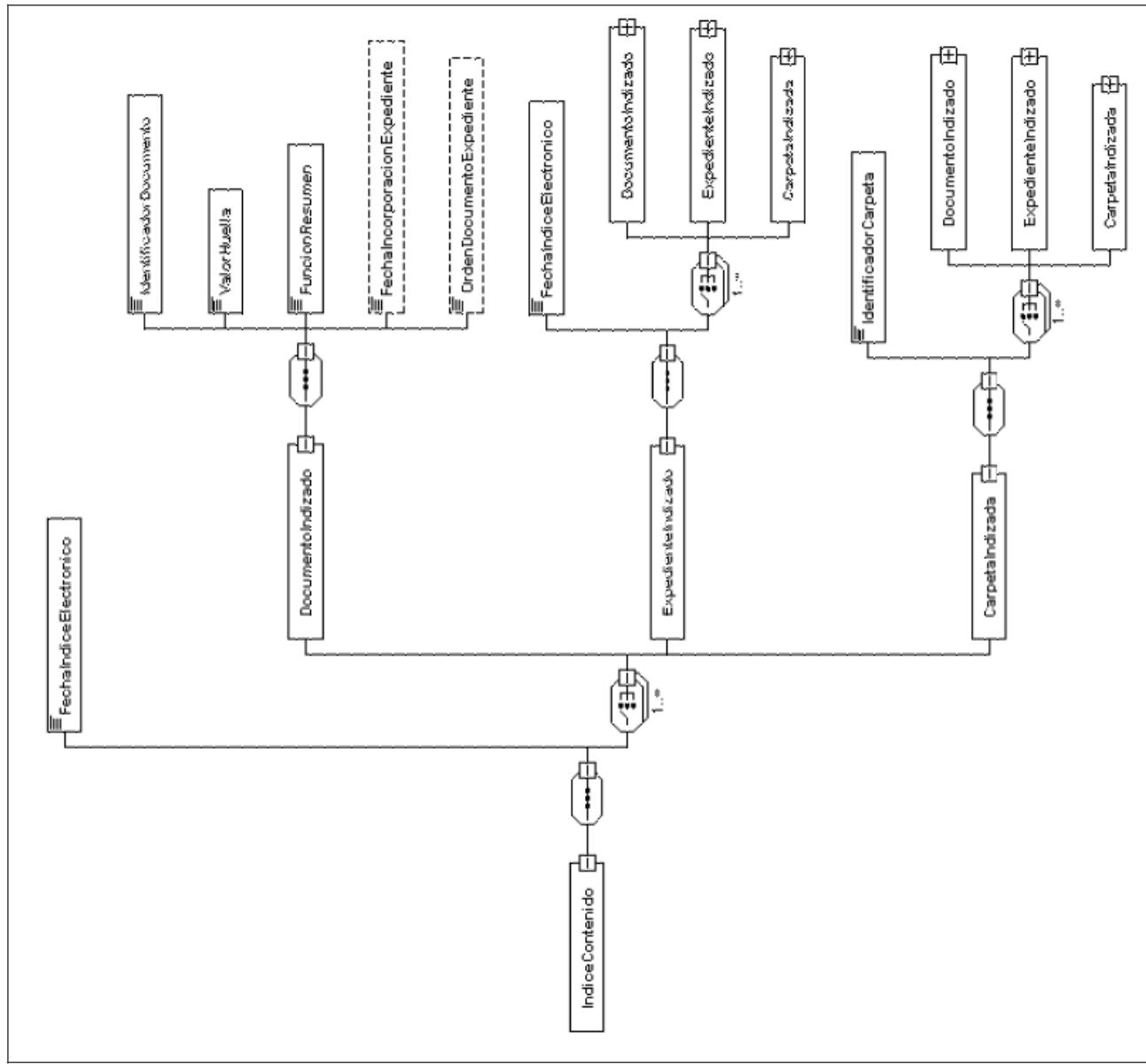
IndiceContenido: ContentIndex

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:enienxpind="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e"
  xmlns:eniconexpind="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/contenido" targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
<xsd:annotation>
<xsd:documentation xml:lang="es"> E-FILE INDEX XSD ENI (v1.0)
</xsd:documentation>
</xsd:annotation>
<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/expediente-e/indice-e/contenido"
  schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/contenido/IndiceContenidoExpedienteEni.xsd"/>
<xsd:element name="index" type="enienxpind:IndexType"/>
<xsd:complexType name="IndexType">
  <xsd:sequence>
    <xsd:element name="ContentIndex" type="eniconexpind:ContentIndexType"/>
    <xsd:element ref="enids:signatures">
      <xsd:annotation>
```

```
<xsd:documentation>There must be at least one signature of the e-file index contents.</xsd:documentation>
</xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
</xsd:schema>
```

### 3. File e-index content XSD



**Legend:**

IndiceContenido: ContentIndex

FechalIndiceElectronico: E-IndexDate

DocumentoIndizado: IndexedDocument

IdentificadorDocumento: DocumentIdentifier

ValorHuella: FootprintValue

FuncionResumen: SummaryFunction

FechalIncorporacionExpediente: FileAdditionDate

OrdenDocumentoExpediente: FileDocumentOrder

ExpedienteIndizado: IndexedFile

FechalIndiceExpediente: E-IndexDate

DocumentoIndizado: IndexedDocument

ExpedienteIndizado: IndexedFile

CarpetalIndizado: IndexedFolder

CarpetalIndizada: IndexedFolder

IdentificadorCarpeta: FolderIdentifier

DocumentoIndizado: IndexedDocument

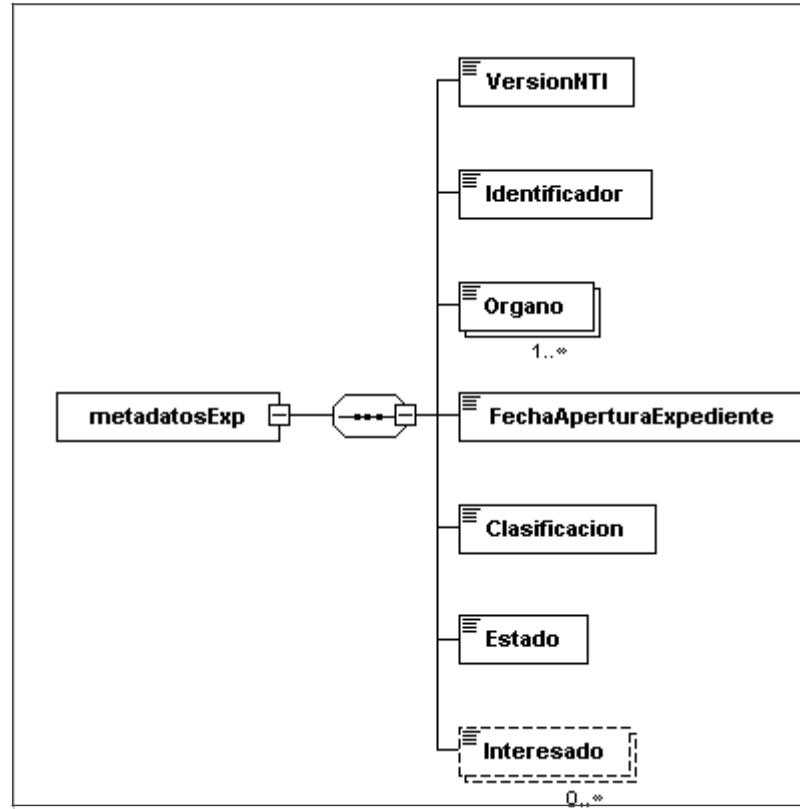
ExpedienteIndizado: IndexedFile

CarpetalIndizado: IndexedFolder

```
<?xml version="1.0" encoding="UTF -8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:eniconexpind="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/contenido"
targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/contenido" elementFormDefault="qualified" attributeFormDefault="unqualified">
<xsd:annotation>
    <xsd:documentation xml:lang="es">E-FILE INDEX CONTENTS XSD ENI (v1.0) </xsd:documentation>
</xsd:annotation>
<xsd:element name="ContentIndex" type="eniconexpind:ContentIndexType"/>
<xsd:complexType name="ContentIndexType">
    <xsd:sequence>
        <xsd:element name="E-IndexDate" type="xsd:dateTime"/>
        <xsd:choice maxOccurs="unbounded">
            <xsd:element name="IndexedDocument"
type="eniconexpind:IndexedDocumentType"/>
            <xsd:element name="IndexedFile"
type="eniconexpind:ContentIndexType"/>
            <xsd:element name="IndexedFolder" type="eniconexpind:IndexedFolderType"/>
        </xsd:choice>
    </xsd:sequence>
    <xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
<xsd:complexType name="IndexedDocumentType">
    <xsd:sequence>
        <xsd:element name="DocumentIdentifier" type="xsd:string"/>
```

```
<xsd:element name="FootprintValue" type="xsd:string"/>
<xsd:element name="SummaryFunction" type="xsd:string"/>
<xsd:element name="FileAdditionDate" type="xsd:dateTime" minOccurs="0"/>
<xsd:element name="FileDocumentOrder" type="xsd:string" minOccurs="0"/>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
<xsd:complexType name="IndexedFolderType">
<xsd:sequence>
<xsd:element name="FolderIdentifier" type="xsd:string"/>
<xsd:choice maxOccurs="unbounded">
<xsd:element name="IndexedDocument"
type="eniconexpind:IndexedDocumentType"/>
<xsd:element name="IndexedFile"
type="eniconexpind:ContentIndexType"/>
<xsd:element name="IndexedFolder" type="eniconexpind:IndexedFolderType"/>
</xsd:choice>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
</xsd:schema>
```

#### 4. E-file metadata XSD



**Legend:**

metadatosExp: FileMetadata

VersionNTI: NTIVersion

Identificador: Identifier

Organo: Body

FechaAperturaExpediente: FileOpeningDate

Clasificacion: Classification

Estado: Status

Interesado: InterestedParty

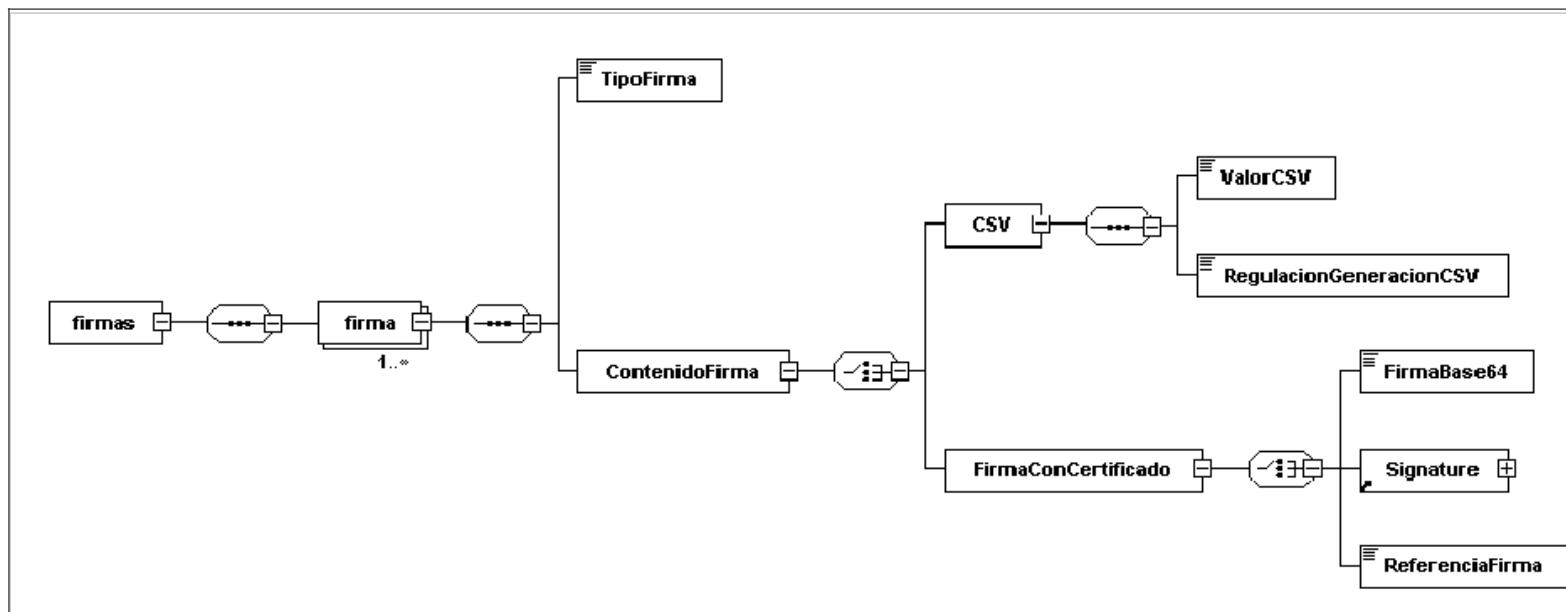
```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:eniexpmeta="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos"
  targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xsd:annotation>
    <xsd:documentation xml:lang="es">E-FILE METADATA XSD ENI (v1.0) </xsd:documentation>
```

```
</xsd:annotation>
<xsd:element name="FileMetadata" type="eniexpmeta:MetadataType"/>
<xsd:complexType name="MetadataType">
  <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="FileOpeningDate" type="xsd:dateTime"/>
    <xsd:element name="Classification" type="xsd:string"/>
    <xsd:element name="Status">
```

```
<xsd:annotation>
  <xsd:documentation xml:lang="es">
    - E01 - Open.
    - E02 - Closed.
    - E03 - Sending index closed.
  </xsd:documentation>
</xsd:annotation>
<xsd:complexType>
  <xsd:simpleContent>
    <xsd:extension base="eniexpmeta:StatusList"/>
  </xsd:simpleContent>
</xsd:complexType>
</xsd:element>
<xsd:element name="InterestedParty" type="xsd:string" minOccurs="0" maxOccurs="unbounded">
  <xsd:annotation>
<xsd:documentation xml:lang="es">Required field when there is at least one interested party.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>

<!--File Status List -->
<xsd:simpleType name="StatusList">
<xsd:restriction base="xsd:string">
  <xsd:enumeration value="E01"/>
  <xsd:enumeration value="E02"/>
  <xsd:enumeration value="E03"/>
</xsd:restriction>
</xsd:simpleType>
</xsd:schema>
```

## 5. Signature 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-SIGNATURE 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:signatures"/>
<xsd:complexType name="signatures">
  <xsd:sequence>
    <xsd:element name="s" type="enids:E-SignatureType" minOccurs="1" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="E-SignatureType">
  <xsd:sequence>
    <xsd:element name="SignatureType">
      <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.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

```

    - 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 comma-separated list must be added of the identifiers of the signed nodes. </xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
</xsd:complexType>
</xsd:schema>

```

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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 Interoperability 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-Files describes the structure of e-files, including e-documents, e-indexes, e-signatures, and minimum required metadata, and the specifications to send them and make them available. For e-file management and preservation issues, this Standard cross-references to the Technical Interoperability Standard for E-Document Management Policy. Finally, the Annexes to this Resolution contain a detailed definition of the minimum required metadata and XML schemas for file exchange. In this regard, the e-file structure as defined in this Standard allows the use of e-signatures as envisaged in the Commission Decision 2011/130/EU, of 25 February, 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-Files whose text appears below.

Two

That the Technical Interoperability Standard for E-Files 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-FILES**

### **Contents**

- I. Purpose
- I. Scope of application
- II. Components of e-files
- III. Metadata of e-files
- IV. Exchange of e-files
- Annex I. Minimum required metadata of e-files
- Annex II. XML schemas for e-file exchange

#### **I. Purpose**

The Technical Interoperability Standard for E-Files is intended to establish the structure and format of e-files, as well as the specifications of the services to send them and make them available.

#### **II. Scope of application**

II.1 This standard shall apply to e-files within the scope established in Article 3 of Royal Decree 4/2010, of 8 January, regulating the National Interoperability Framework for E-Government.

II.2 The specifications set forth in this Standard can be applied to other sets of e-documents which, having been created under no regulated procedures, are the result of a series of coherent actions leading to a specific outcome.

#### **III. Components of e-files**

##### **III.1 The components of e-files are:**

a) E-documents, which shall comply with the structure and format specifications in the Technical Interoperability Standard for E-Documents.

E-documents can be part of e-files as independent elements or in folders, the

latter being sets of e-documents created for functional purposes, or as part of another file, embedded in the former.

b) E-indexes which, according to the provisions in Article 32.2 of Law 11/2007, of 22 June, shall guarantee the integrity of e-files and their retrieval whenever necessary.

E-indexes shall contain the whole set of e-documents associated with a file at a given moment and, if necessary, their distribution in folders or files.

c) E-index signature by the Public Administration, body or intervening agency, in accordance with regulations in force.

d) Metadata.

III.2 The addition of an e-file to a document management system shall comply with the provisions in the Technical Interoperability Standard for E-Documents and the Technical Interoperability Standard for E-Document Management Policy.

#### IV. Metadata of e-files

IV.1 The minimum required metadata of e-files:

a) Shall be those in Annex I.

b) Shall be associated during e-file creation for sending e-files and making them available.

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.

IV.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. Exchange of e-files

V.1 The exchange of e-files for sending them or making them available shall consist in sending the structure described in Annex II first, without precluding others set out in the corresponding regulations. Once the structure has been sent, each of the e-documents in the e-file shall be sent in the established order and in compliance with the Technical Interoperability Standard for E-Documents.

V.2 As an exception, other structures can be used to exchange e-files between Public Administration agencies if the parties have agreed on such structures beforehand. In any case, e-files that must be sent to third parties must be converted by the sender to the structure defined in Annex II.

V.3 When the nature or the size of the evidence or documents in the e-file make it difficult to fit in the established structures, a document shall be added specifying which are such documents or evidence. They shall be kept in custody by the managing body and provided separately if required.

V.4 The e-index of the files being exchanged shall at least contain:

a) The date of index creation.

b) For each e-document, the identifier, digital footprint, summary function used to create them in compliance with the provisions in the Technical Interoperability Standard

for Catalogue of Standards, and optionally the date when and the order in which they were added to the file.

c) If relevant, the distribution of documents in folders and the hierarchy of nested files.

V.5 For the exchange of e-files between Public Administration agencies in automated processes:

a) The Public Administration communication network should preferably be used as the means of file transfer.

b) If the e-file 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.

V.6 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.

# **ANNEXES**

## **ANNEX I**

### **Minimum required metadata of e-files**

<sup>1</sup> In the table, repeatability refers only to the metadata accompanying a file in an exchange, irrespective of other metadata assigned and managed internally by each Public Administration agency in compliance with the Technical Interoperability Standard for E-document Management Policies.

## <sup>2</sup> 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.

**<AAAA>**: File creation year (4 characters).

**<Specific\_ID>**: Alphanumeric code uniquely identifying the entity according to its own needs as long as it ensures uniqueness.

<sup>3</sup> Metadata encoding when the procedure is not found in SIA:

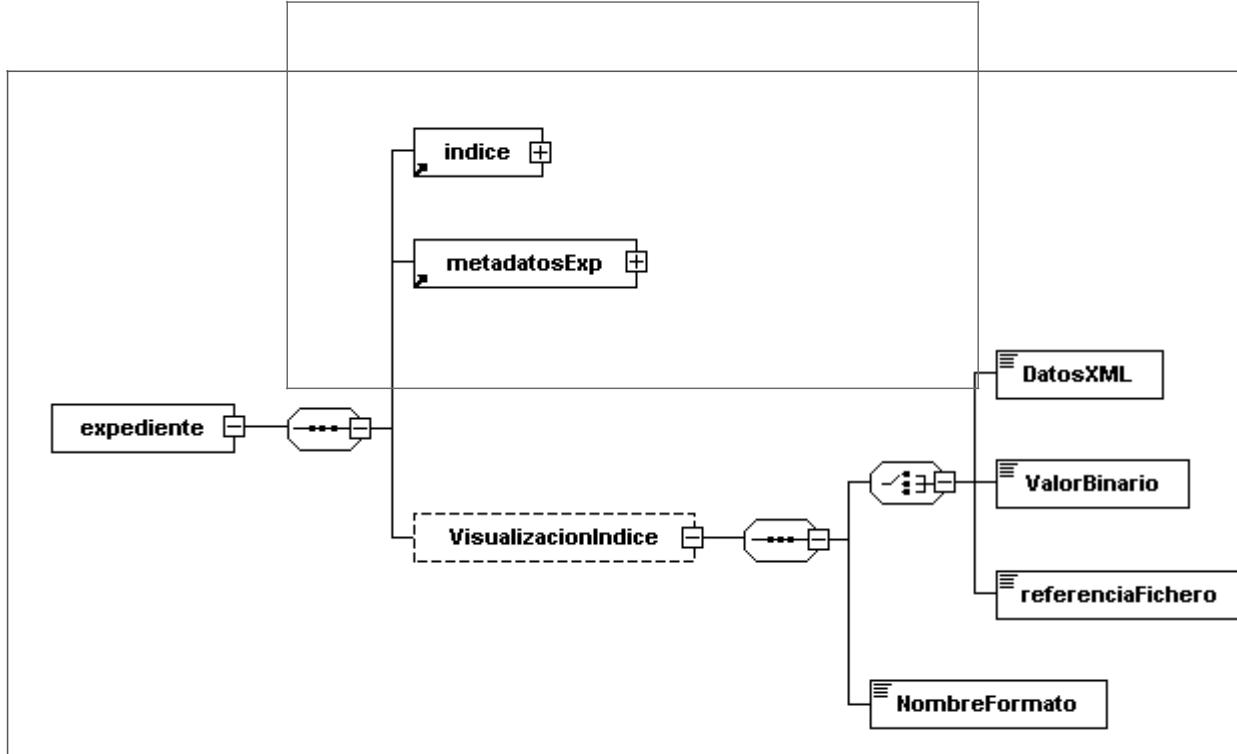
**<Body>**: See encoding of "Body" metadata.

**<Specific\_ID\_PRO>**: 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 in a sequence or be a replica of the ID used internally (30 characters).

Signature type	Indication of the type of signature attached to the document.	1:N	Character string	- CSV. - E-signature formats for e-documents as defined in the <i>Technical Interoperability Standard for Signature and Certification Policies in the Public Administration</i> .
For signature type = CSV				
CSV value	Value of CSV.	1:N	Character string	N/A.
CSV generation definition	Reference to the decree, resolution, or document establishing the creation of the corresponding CSV.	1:N	Character string	For the General Administration (AGE): BOE (Official Spanish Gazette) reference: BOE-A-YYYY-XXXX For others: corresponding reference.

ANNEX II  
XML schemas for e-file exchange

1. E-file XSD



**Legend:**

expediente: file  
indice: index  
metadatosExp: FileMetadata  
VisualizaciónIndice: IndexView  
DatosXML: XMLData  
ValorBinario: BinaryValue  
referenciaFichero: FileReference  
NombreFormato: FormatName

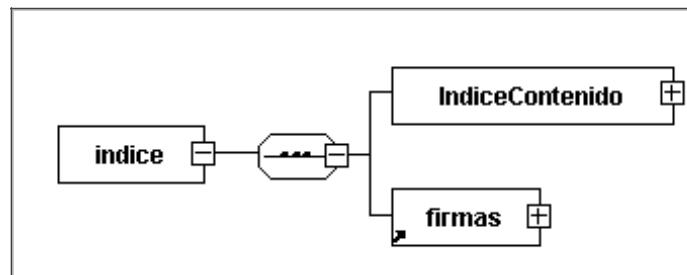
```
<?xml version="1.0" encoding="UTF -8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:eniexpind="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e"
  xmlns:eniexpmeta="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos"
  xmlns:eniexp="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e"
  xmlns.enifile="http://administracionelectronica.gob.es/ENI/XSD/v1.0/documento-e/contenido"
```

```
targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e"
elementFormDefault="qualified" attributeFormDefault="unqualified">
<xsd:annotation>
  <xsd:documentation xml:lang="es"> E-FILE XSD ENI (v1.0)</xsd:documentation>
</xsd:annotation>
<xsd:import namespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e" schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/IndiceExpedienteEni.xsd"/>
<xsd:import namespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos" schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos/MetadatosExpedienteEni.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="file" type="eniexp:FileType"/>
<xsd:complexType name=" FileType">
  <xsd:annotation>
    <xsd:documentation>
```

For e-file exchange, first the file's index is sent. Then, the documents contained in the file, one by one, after the distribution in the index contents.

```
</xsd:documentation>
</xsd:annotation>
<xsd:sequence>
  <xsd:element ref="enienxpind:index"/>
  <xsd:element ref="enienxpmeta:metadataExp"/>
  <xsd:element name="IndexView" type="enifile:ContentType" minOccurs="0" maxOccurs="1"/>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
</xsd:schema>
```

## 2. File e-index XSD



### Legend:

Indice: index

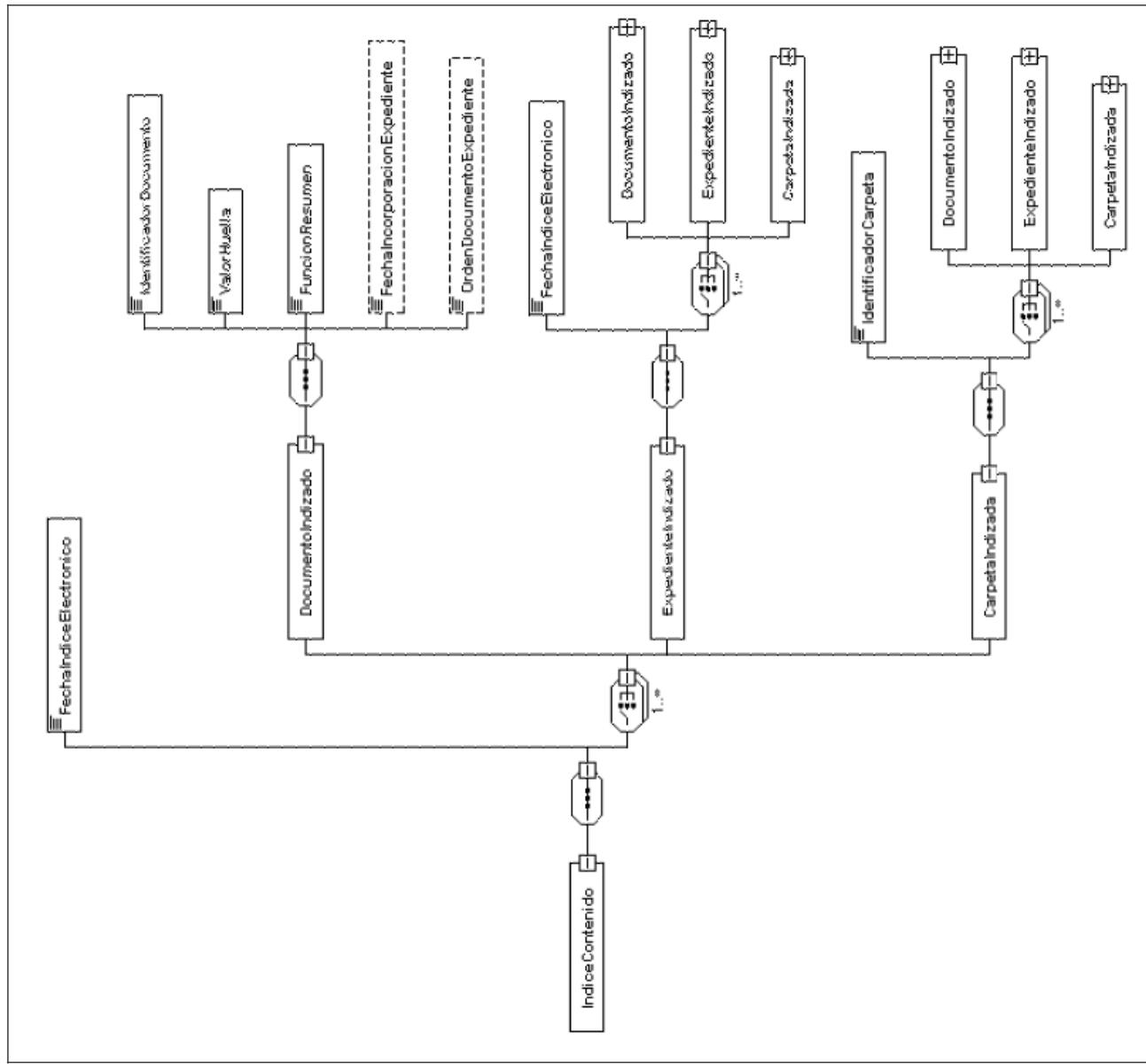
IndiceContenido: ContentIndex

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:enienxpind="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e"
  xmlns:eniconexpind="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/contenido" targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
<xsd:annotation>
<xsd:documentation xml:lang="es"> E-FILE INDEX XSD ENI (v1.0)
</xsd:documentation>
</xsd:annotation>
<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/expediente-e/indice-e/contenido"
  schemaLocation="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/contenido/IndiceContenidoExpedienteEni.xsd"/>
<xsd:element name="index" type="enienxpind:IndexType"/>
<xsd:complexType name="IndexType">
  <xsd:sequence>
    <xsd:element name="ContentIndex" type="eniconexpind:ContentIndexType"/>
    <xsd:element ref="enids:signatures">
      <xsd:annotation>
```

```
<xsd:documentation>There must be at least one signature of the e-file index contents.</xsd:documentation>
</xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
</xsd:schema>
```

### 3. File e-index content XSD



**Legend:**

IndiceContenido: ContentIndex

FechalIndiceElectronico: E-IndexDate

DocumentoIndizado: IndexedDocument

IdentificadorDocumento: DocumentIdentifier

ValorHuella: FootprintValue

FuncionResumen: SummaryFunction

FechalIncorporacionExpediente: FileAdditionDate

OrdenDocumentoExpediente: FileDocumentOrder

ExpedienteIndizado: IndexedFile

FechalIndiceExpediente: E-IndexDate

DocumentoIndizado: IndexedDocument

ExpedienteIndizado: IndexedFile

CarpetalIndizado: IndexedFolder

CarpetalIndizada: IndexedFolder

IdentificadorCarpeta: FolderIdentifier

DocumentoIndizado: IndexedDocument

ExpedienteIndizado: IndexedFile

CarpetalIndizado: IndexedFolder

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

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:eniconexpind="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/contenido"
```

```
targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/indice-e/contenido" elementFormDefault="qualified" attributeFormDefault="unqualified">
```

```
<xsd:annotation>
```

```
    <xsd:documentation xml:lang="es">E-FILE INDEX CONTENTS XSD ENI (v1.0) </xsd:documentation>
```

```
</xsd:annotation>
```

```
<xsd:element name="ContentIndex" type="eniconexpind:ContentIndexType"/>
```

```
<xsd:complexType name="ContentIndexType">
```

```
    <xsd:sequence>
```

```
        <xsd:element name="E-IndexDate" type="xsd:dateTime"/>
```

```
        <xsd:choice maxOccurs="unbounded">
```

```
            <xsd:element name="IndexedDocument"
```

```
                type="eniconexpind:IndexedDocumentType"/>
```

```
            <xsd:element name="IndexedFile"
```

```
                type="eniconexpind:ContentIndexType"/>
```

```
            <xsd:element name="IndexedFolder" type="eniconexpind:IndexedFolderType"/>
```

```
        </xsd:choice>
```

```
    </xsd:sequence>
```

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

```
</xsd:complexType>
```

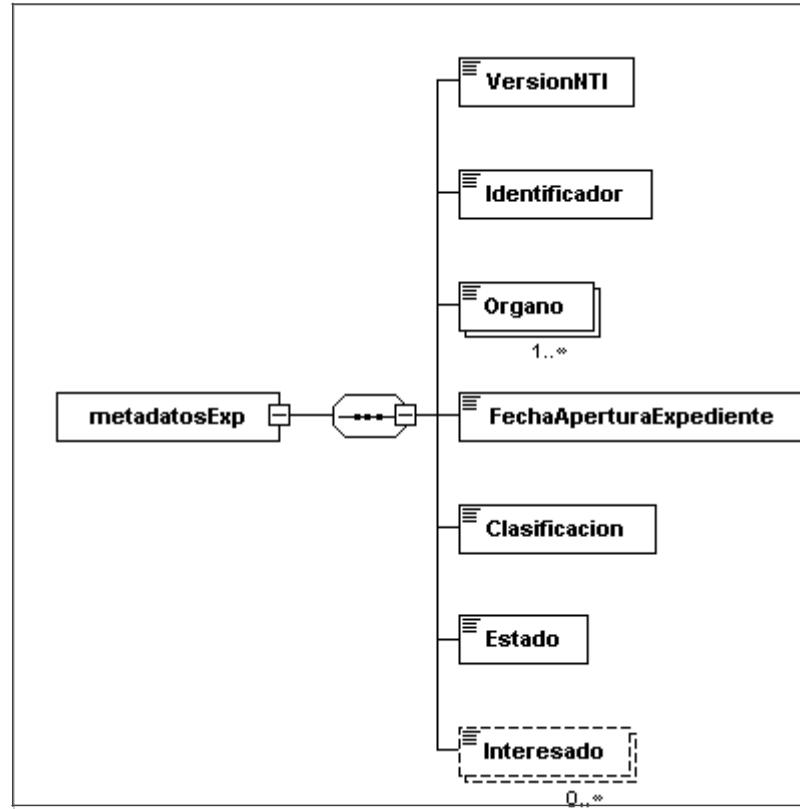
```
<xsd:complexType name="IndexedDocumentType">
```

```
    <xsd:sequence>
```

```
        <xsd:element name="DocumentIdentifier" type="xsd:string"/>
```

```
<xsd:element name="FootprintValue" type="xsd:string"/>
<xsd:element name="SummaryFunction" type="xsd:string"/>
<xsd:element name="FileAdditionDate" type="xsd:dateTime" minOccurs="0"/>
<xsd:element name="FileDocumentOrder" type="xsd:string" minOccurs="0"/>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
<xsd:complexType name="IndexedFolderType">
<xsd:sequence>
<xsd:element name="FolderIdentifier" type="xsd:string"/>
<xsd:choice maxOccurs="unbounded">
<xsd:element name="IndexedDocument"
  type="eniconexpind:IndexedDocumentType"/>
<xsd:element name="IndexedFile"
  type="eniconexpind:ContentIndexType"/>
<xsd:element name="IndexedFolder" type="eniconexpind:IndexedFolderType"/>
</xsd:choice>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>
</xsd:schema>
```

#### 4. E-file metadata XSD



**Legend:**

metadatosExp: FileMetadata

VersionNTI: NTIVersion

Identificador: Identifier

Organo: Body

FechaAperturaExpediente: FileOpeningDate

Clasificacion: Classification

Estado: Status

Interesado: InterestedParty

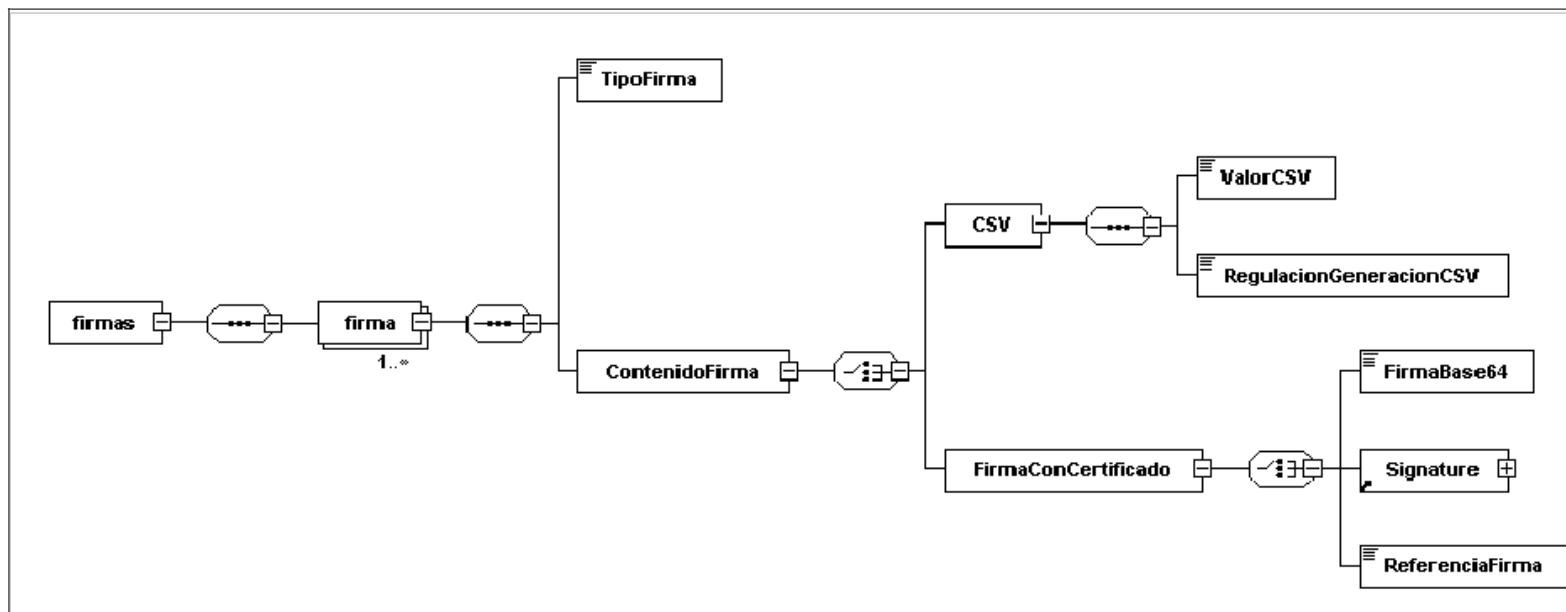
```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:eniexpmeta="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos"
  targetNamespace="http://administracionelectronica.gob.es/ENI/XSD/v1.0/expediente-e/metadatos"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <xsd:annotation>
    <xsd:documentation xml:lang="es">E-FILE METADATA XSD ENI (v1.0) </xsd:documentation>
```

```
</xsd:annotation>
<xsd:element name="FileMetadata" type="eniexpmeta:MetadataType"/>
<xsd:complexType name="MetadataType">
  <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="FileOpeningDate" type="xsd:dateTime"/>
    <xsd:element name="Classification" type="xsd:string"/>
    <xsd:element name="Status">
```

```
<xsd:annotation>
  <xsd:documentation xml:lang="es">
    - E01 - Open.
    - E02 - Closed.
    - E03 - Sending index closed.
  </xsd:documentation>
</xsd:annotation>
<xsd:complexType>
  <xsd:simpleContent>
    <xsd:extension base="eniexpmeta:StatusList"/>
  </xsd:simpleContent>
</xsd:complexType>
</xsd:element>
<xsd:element name="InterestedParty" type="xsd:string" minOccurs="0" maxOccurs="unbounded">
  <xsd:annotation>
<xsd:documentation xml:lang="es">Required field when there is at least one interested party.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="Id" type="xsd:ID" use="optional"/>
</xsd:complexType>

<!--File Status List -->
<xsd:simpleType name="StatusList">
<xsd:restriction base="xsd:string">
  <xsd:enumeration value="E01"/>
  <xsd:enumeration value="E02"/>
  <xsd:enumeration value="E03"/>
</xsd:restriction>
</xsd:simpleType>
</xsd:schema>
```

## 5. Signature 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-SIGNATURE 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:signatures"/>
<xsd:complexType name="signatures">
  <xsd:sequence>
    <xsd:element name="s" type="enids:E-SignatureType" minOccurs="1" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="E-SignatureType">
  <xsd:sequence>
    <xsd:element name="SignatureType">
      <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.
        </xsd:documentation>
      </xsd:annotation>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

```

    - 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 comma-separated list must be added of the identifiers of the signed nodes. </xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
</xsd:complexType>
</xsd:schema>

```