

Appendix A

XML schema

The following XML Schema provides the structure and the data types to represent ontologies of records in XML language. This schema includes a name space that is used as a prefix to avoid ambiguity among elements.

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns="http://www.utm.mx/~sigep/ recursos/ontologyofrecords.xhtml"
targetNamespace="http://www.utm.mx/~sigep/ recursos/ontologyofrecords.xhtml"
elementFormDefault="qualified">

  <xs:element name="ontologyofrecords">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="algorithm"/>
        <xs:element ref="cluster" maxOccurs="unbounded"/>
      </xs:sequence>
      <xs:attributeGroup ref="attlist.ontologyofrecords"/>
    </xs:complexType>
```

```
</xs:element>

<xs:attributeGroup name="attlist.ontologyofrecords">
  <xs:attribute name="date" type="xs:date" use="required"/>
</xs:attributeGroup>

<xs:element name="algorithm">
  <xs:complexType>
    <xs:attributeGroup ref="attlist.algorithm"/>
  </xs:complexType>
</xs:element>

<xs:attributeGroup name="attlist.algorithm">
  <xs:attribute name="name" default="FIHC">
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="FIHC"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
  <xs:attribute name="globalsupport" use="required"/>
  <xs:attribute name="clustersupport" use="required"/>
</xs:attributeGroup>

<xs:element name="cluster">
  <xs:complexType>
    <xs:sequence>
```

```
        <xs:element ref="label"/>
        <xs:element ref="level"/>
        <xs:element ref="record" minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

<xs:element name="label" type="xs:string"/>

<xs:element name="level" type="xs:integer"/>

<xs:element name="record">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="title"/>
            <xs:element ref="subject" minOccurs="0"/>
            <xs:element ref="description" minOccurs="0"/>
            <xs:element ref="identifier"/>
            <xs:element ref="url"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>

<xs:element name="title" type="xs:string"/>
<xs:element name="subject" type="xs:string"/>
<xs:element name="description" type="xs:string"/>
<xs:element name="identifier" type="xs:string"/>
```

`</xs:schema>`