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<?xml version="1.0" encoding="UTF-8" ?>
- <!--
  *****
  Schema templates for XML Mast

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-->
- <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:mast_trace="http://mast.unican.es/xmlmast/trace"
  targetNamespace="http://mast.unican.es/xmlmast/trace"
  elementFormDefault="qualified" attributeFormDefault="unqualified">
  <!-- SIMPLE TYPES -->
- <xs:simpleType name="Date_Time">
  <xs:restriction base="xs:dateTime" />
  <!-- YYYY-MM-DDThh:mm:ss format -->
</xs:simpleType>
- <xs:simpleType name="Time">
- <xs:restriction base="xs:float">
  <xs:minInclusive value="0.0" />
</xs:restriction>
  <!-- Time interval quantity type -->
</xs:simpleType>
- <xs:simpleType name="Identifier">
- <xs:restriction base="xs:ID">
  <xs:pattern value="([a-z]|[A-Z])([a-z]|[A-Z]|[0-9]|.|_)*" />
</xs:restriction>
  <!-- Identify a object univocally:begin with a letter, followed by
  letters, digits, underscores ('_') or periods ('.') -->
</xs:simpleType>
- <xs:simpleType name="External_Reference">
- <xs:restriction base="xs:string">
  <xs:pattern value="([a-z]|[A-Z])([a-z]|[A-Z]|[0-9]|.|_)*" />
</xs:restriction>
  <!-- References an external object: begin with a letter, followed by
  letters, digits, underscores ('_') or periods ('.') -->
</xs:simpleType>
- <xs:simpleType name="Source_Identifier">
  <xs:restriction base="xs:int" />
  <!-- Key integer (positive, negative, o zero) identifier of a model
  object that is able to generate trace messages. -->
</xs:simpleType>
- <xs:simpleType name="Message_Identifier">
  <xs:restriction base="xs:nonNegativeInteger" />
  <!-- Non negative integer (positive o zero) thas is an univoval
  identifier of a message type -->
</xs:simpleType>
  <!-- MESSAGE TYPE LIST -->
- <xs:complexType name="Message_Type">
  <xs:attribute name="Mid" type="mast_trace:Message_Identifier"
  use="required" />
  <xs:attribute name="Type" type="xs:string" use="optional" />
  <!-- Link an explanatory text (type)with a message type (Mid). -->

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</xs:complexType>
- <xs:complexType name="Msg_Type_List">
- <xs:sequence>
  <xs:element name="Msg_Type" type="mast_trace:Message_Type"
    maxOccurs="unbounded" />
</xs:sequence>
  <!-- List of message types that are referenced in the traces file -->
  >
</xs:complexType>
<!-- MESSAGE LIST -->
- <xs:complexType name="Source">
  <xs:attribute name="Sid" type="mast_trace:Source_Identifier"
    use="required" />
  <xs:attribute name="Name" type="mast_trace:External_Reference"
    use="optional" />
  <xs:attribute name="Type" type="xs:string" use="optional" />
- <!--
  Data linked to a model object that is able to generate messages:
  (Sid)Source key number, (Name) Sou
  (Type) type of object model

  -->
</xs:complexType>
- <xs:complexType name="Src_List">
- <xs:sequence>
  <xs:element name="Src" type="mast_trace:Source"
    maxOccurs="unbounded" />
</xs:sequence>
  <!-- List of model object referenced as a source of messages -->
</xs:complexType>
<!-- MESSAGE LIST -->
- <xs:complexType name="Message">
  <xs:attribute name="T" type="mast_trace:Time" use="required" />
  <xs:attribute name="S" type="mast_trace:Source_Identifier"
    use="required" />
  <xs:attribute name="M" type="mast_trace:Message_Identifier"
    use="required" />
  <!-- Data linked to a message instance: (Time) Ocurrance time, (Sid)
  Source of message, (Mid) Message type -->
</xs:complexType>
- <xs:complexType name="Msg_List">
- <xs:sequence>
  <xs:element name="Msg" type="mast_trace:Message"
    maxOccurs="unbounded" />
</xs:sequence>
  <!-- List of messages included in a traces file -->
</xs:complexType>
<!-- TRACE FILE (root element) -->
- <xs:element name="TRACE_FILE">
  <!-- Data included in a traces file: -->
- <xs:complexType>
- <xs:sequence>
  <!-- Declared message type list -->
  <xs:element name="Msg_Type_List"
    type="mast_trace:Msg_Type_List" minOccurs="0" />
  <!-- Declared model object as message source -->
  <xs:element name="Src_List" type="mast_trace:Src_List"
    minOccurs="0" />

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    <!-- Message list of the traces register -->
    <xs:element name="Msg_List" type="mast_trace:Msg_List" />
  </xs:sequence>
  <xs:attribute name="Model_Name" type="mast_trace:Identifier"
    use="required" />
  <xs:attribute name="Model_Date" type="mast_trace:Date_Time"
    use="required" />
  <xs:attribute name="Generation_Tool" type="xs:string"
    use="required" />
  <xs:attribute name="Generation_Profile" type="xs:string"
    use="optional" />
  <xs:attribute name="Generation_Date" type="mast_trace:Date_Time"
    use="required" />
  <xs:attribute name="Start_Time" type="mast_trace:Time"
    use="required" />
  <xs:attribute name="End_Time" type="mast_trace:Time"
    use="required" />
  <!-- Real-time situation description -->
- <!--
    Name of the of the real-time situation model that has
    generate

-->
  <!-- Date of last modification of the analyses real-time
  situation model -->
  <!-- Text representing the name of the tool that generated the
  traces -->
  <!-- Text representing the command and options used to invoke the
  tool for the generation of the traces -->
  <!-- Date of generation of traces -->
  <!-- Init time of the trace generation -->
  <!-- End time of the trace generation -->
</xs:complexType>
</xs:element>
</xs:schema>

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