

Great Moonstone Oxen of the First and Forsaken Oceans

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July 10, 2013

INTRODUCTION

What is the problem?

It's often easy to forget the many crises occurring throughout the world. This site is designed to gather the data on every crisis, and present in a simple format. We gather details about victims, and information on organizations and people that want to help.

What are the use cases?

With the increasing availability of telecommunication access and this site makes use of this to share news and help victims. This site can be a good source for anyone looking to get informed and help. We can provide contact information for people and organizations involved in helping the victims of crises around the world. People who want to help can look to our site for the best ways to get involved, whether it be donating to the right charities or volunteering at a local site.

DESIGN

XML Schema

Our class has been divided into separate groups for this project, but most groups have agreed upon a shared schema for XML. The schema as of the latest version is printed here, but the latest version can be found with this link.

Updated schema on Github

```
1 <?xml version="1.0" ?>
2
3 <!-- XSD for World Crises database -->
4
5 <xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
6   <xsd:element name="WorldCrises">
7     <xsd:complexType>
8       <xsd:sequence>
9         <xsd:element name="Crisis" type="CrisisType" minOccurs="1"
10           maxOccurs="unbounded" />
11         <xsd:element name="Person" type="PersonType" minOccurs="1"
12           maxOccurs="unbounded" />
13         <xsd:element name="Organization" type="OrgType" minOccurs="1"
14           maxOccurs="unbounded" />
15       </xsd:sequence>
16     </xsd:complexType>
17
18     <!-- All keys and keyrefs go here -->
19     <xsd:key name="CrisisKey">
20       <xsd:selector xpath="Crisis" />
21       <xsd:field xpath="@ID" />
22     </xsd:key>
23     <xsd:keyref name="CrisisKeyRef-Person" refer="CrisisKey">
24       <xsd:selector xpath="Person/Crises/Crisis" />
25       <xsd:field xpath="@ID" />
26     </xsd:keyref>
27     <xsd:keyref name="CrisisKeyRef-Org" refer="CrisisKey">
28       <xsd:selector xpath="Organization/Crises/Crisis" />
29       <xsd:field xpath="@ID" />
30     </xsd:keyref>
31
32     <xsd:key name="PersonKey">
33       <xsd:selector xpath="Person" />
34       <xsd:field xpath="@ID" />
35     </xsd:key>
36     <xsd:keyref name="PersonKeyRef-Crisis" refer="PersonKey">
37       <xsd:selector xpath="Crisis/People/Person" />
38       <xsd:field xpath="@ID" />
39     </xsd:keyref>
40     <xsd:keyref name="PersonKeyRef-Org" refer="PersonKey">
41       <xsd:selector xpath="Organization/People/Person" />
42       <xsd:field xpath="@ID" />
43     </xsd:keyref>
44
45     <xsd:key name="OrgKey">
46       <xsd:selector xpath="Organization" />
47       <xsd:field xpath="@ID" />
48     </xsd:key>
49     <xsd:keyref name="OrgKeyRef-Crisis" refer="OrgKey">
50       <xsd:selector xpath="Crisis/Organizations/Org" />
51       <xsd:field xpath="@ID" />
52     </xsd:keyref>
53     <xsd:keyref name="OrgKeyRef-Person" refer="OrgKey">
54       <xsd:selector xpath="Person/Organizations/Org" />
55       <xsd:field xpath="@ID" />
56     </xsd:keyref>
57   </xsd:element>
58
59   <!-- Crisis Data Type -->
60   <!-- Required: Name, ID (attributes), People, Orgs (each with ID attributes) -->
61   <xsd:complexType name="CrisisType">
62     <xsd:sequence>
63       <xsd:element name="People" minOccurs="0" maxOccurs="1">
64         <xsd:complexType>
65           <xsd:sequence>
66             <xsd:element name="Person" type="PersonWithID"
67               minOccurs="1" maxOccurs="unbounded" />
68           </xsd:sequence>
69         </xsd:complexType>
70       </xsd:element>
71       <xsd:element name="Organizations" minOccurs="0" maxOccurs="1">
72         <xsd:complexType>
73           <xsd:sequence>
74             <xsd:element name="Org" type="OrgWithID" minOccurs="1"
```

```

71         maxOccurs="unbounded" />
72     </xsd:sequence>
73 </xsd:complexType>
74 </xsd:element>
75 <xsd:element name="Kind" type="xsd:token" minOccurs="0" maxOccurs="
76 1" />
77 <xsd:element name="Date" type="xsd:date" minOccurs="0" maxOccurs="1
78 " />
79 <xsd:element name="Time" type="xsd:time" minOccurs="0" maxOccurs="1
80 " />
81 <xsd:element name="Locations" type="ListType" minOccurs="0"
82 maxOccurs="1" />
83 <xsd:element name="HumanImpact" type="ListType" minOccurs="0"
84 maxOccurs="1" />
85 <xsd:element name="EconomicImpact" type="ListType" minOccurs="0"
86 maxOccurs="1" />
87 <xsd:element name="ResourcesNeeded" type="ListType" minOccurs="0"
88 maxOccurs="1" />
89 <xsd:element name="WaysToHelp" type="ListType" minOccurs="0"
90 maxOccurs="1" />
91 <xsd:element name="Common" type="CommonType" minOccurs="0"
92 maxOccurs="1" />
93 <xsd:any minOccurs="0" />
94 </xsd:sequence>
95 <xsd:attribute name="ID" type="CrisisIDType" use="required" />
96 <xsd:attribute name="Name" type="xsd:token" use="required" />
97 </xsd:complexType>
98
99 <!-- Person Data Type -->
100 <!-- Required: Name, ID (attributes), Crises, Orgs (each with ID attributes) -->
101 <xsd:complexType name="PersonType">
102 <xsd:sequence>
103 <xsd:element name="Crises" minOccurs="0" maxOccurs="1">
104 <xsd:complexType>
105 <xsd:sequence>
106 <xsd:element name="Crisis" type="CrisisWithID"
107 minOccurs="1" maxOccurs="unbounded" />
108 </xsd:sequence>
109 </xsd:complexType>
110 </xsd:element>
111 <xsd:element name="Organizations" minOccurs="0" maxOccurs="1">
112 <xsd:complexType>
113 <xsd:sequence>
114 <xsd:element name="Org" type="OrgWithID" minOccurs="1"
115 maxOccurs="unbounded" />
116 </xsd:sequence>
117 </xsd:complexType>
118 </xsd:element>
119 <xsd:element name="Kind" type="xsd:token" minOccurs="0" maxOccurs="
120 1" />
121 <xsd:element name="Location" type="xsd:token" minOccurs="0"
122 maxOccurs="1" />
123 <xsd:element name="Common" type="CommonType" minOccurs="0"
124 maxOccurs="1" />
125 <xsd:any minOccurs="0" />
126 </xsd:sequence>
127 <xsd:attribute name="ID" type="PersonIDType" use="required" />
128 <xsd:attribute name="Name" type="xsd:token" use="required" />
129 </xsd:complexType>
130
131 <!-- Person Data Type -->
132 <!-- Required: Name, ID (attributes), Crises, People (each with ID attributes) -->
133 <xsd:complexType name="OrgType">
134 <xsd:sequence>
135 <xsd:element name="Crises" minOccurs="0" maxOccurs="1">
136 <xsd:complexType>
137 <xsd:sequence>
138 <xsd:element name="Crisis" type="CrisisWithID"
139 minOccurs="1" maxOccurs="unbounded" />
140 </xsd:sequence>
141 </xsd:complexType>
142 </xsd:element>
143 <xsd:element name="People" minOccurs="0" maxOccurs="1">
144 <xsd:complexType>
145 <xsd:sequence>
146 <xsd:element name="Person" type="PersonWithID"
147 minOccurs="1" maxOccurs="unbounded" />
148 </xsd:sequence>
149 </xsd:complexType>
150 </xsd:element>
151 <xsd:element name="Kind" type="xsd:token" minOccurs="0" maxOccurs="
152 1" />
153 <xsd:element name="Location" type="xsd:token" minOccurs="0"
154 maxOccurs="1" />
155 <xsd:element name="History" type="ListType" minOccurs="0" maxOccurs
156 = "1" />

```

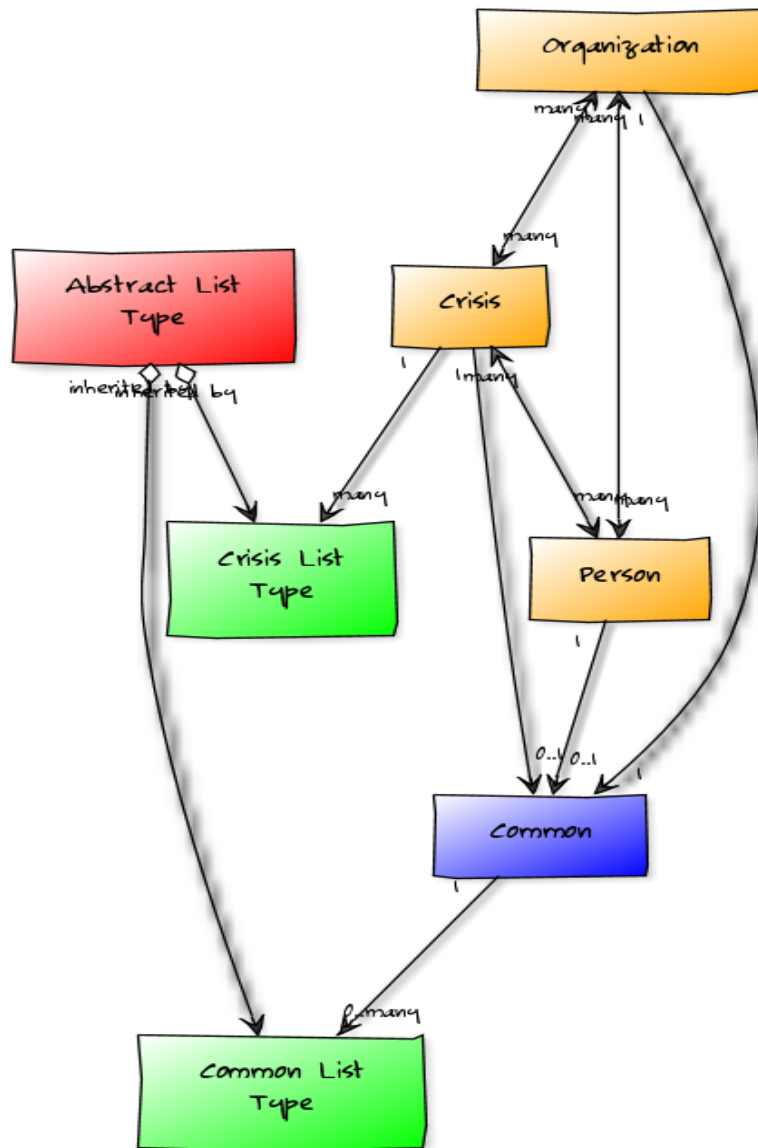
```

140         <xsd:element name="ContactInfo" type="ListType" minOccurs="0"
141             maxOccurs="1" />
142         <xsd:element name="Common" type="CommonType" minOccurs="0"
143             maxOccurs="1" />
144         <xsd:any minOccurs="0" />
145     </xsd:sequence>
146     <xsd:attribute name="ID" type="OrgIDType" use="required" />
147     <xsd:attribute name="Name" type="xsd:token" use="required" />
148 </xsd:complexType>
149
150 <!-- CommonType contains elements common to crises, people and
151      organizations. Each of these elements is a list. -->
152 <xsd:complexType name="CommonType">
153     <xsd:sequence>
154         <xsd:element name="Citations" type="ListType" minOccurs="0"
155             maxOccurs="1" />
156         <xsd:element name="ExternalLinks" type="ListType" minOccurs="0"
157             maxOccurs="1" />
158         <xsd:element name="Images" type="ListType" minOccurs="0" maxOccurs="
159             1" />
160         <xsd:element name="Videos" type="ListType" minOccurs="0" maxOccurs="
161             1" />
162         <xsd:element name="Maps" type="ListType" minOccurs="0" maxOccurs="1
163             " />
164         <xsd:element name="Feeds" type="ListType" minOccurs="0" maxOccurs="
165             1" />
166         <xsd:element name="Summary" type="xsd:token" minOccurs="0"
167             maxOccurs="1" />
168     </xsd:sequence>
169 </xsd:complexType>
170
171 <!-- ListType is a list of tokens. Each token can have an optional
172      hyperlink (href attribute) and/or link for embedded object (embed
173      attribute).
174      This is a generic type that can accomodate all types of lists (images,
175      videos, citations, text, etc.) See example XML for usage -->
176 <xsd:complexType name="ListType">
177     <xsd:sequence>
178         <xsd:element name="li" minOccurs="1" maxOccurs="unbounded">
179             <xsd:complexType mixed="true">
180                 <xsd:attribute name="href" type="xsd:token" />
181                 <xsd:attribute name="embed" type="xsd:token" />
182                 <xsd:attribute name="text" type="xsd:token" />
183             </xsd:complexType>
184         </xsd:element>
185     </xsd:sequence>
186 </xsd:complexType>
187
188 <!-- Use these when making references to crises, people or orgs -->
189 <xsd:complexType name="CrisisWithID">
190     <xsd:attribute name="ID" type="CrisisIDType" use="required" />
191 </xsd:complexType>
192
193 <xsd:complexType name="PersonWithID">
194     <xsd:attribute name="ID" type="PersonIDType" use="required" />
195 </xsd:complexType>
196
197 <xsd:complexType name="OrgWithID">
198     <xsd:attribute name="ID" type="OrgIDType" use="required" />
199 </xsd:complexType>
200
201 <!-- All ID Types go here -->
202 <xsd:simpleType name="CrisisIDType">
203     <xsd:restriction base="IDType">
204         <xsd:pattern value="CRI-[A-Z]{6}" />
205     </xsd:restriction>
206 </xsd:simpleType>
207
208 <xsd:simpleType name="PersonIDType">
209     <xsd:restriction base="IDType">
210         <xsd:pattern value="PER-[A-Z]{6}" />
211     </xsd:restriction>
212 </xsd:simpleType>
213
214 <xsd:simpleType name="OrgIDType">
215     <xsd:restriction base="IDType">
216         <xsd:pattern value="ORG-[A-Z]{6}" />
217     </xsd:restriction>
218 </xsd:simpleType>
219
220 <xsd:simpleType name="IDType">
221     <xsd:restriction base="xsd:token">
222         <xsd:length value="10" />
223     </xsd:restriction>
224 </xsd:simpleType>
225 </xsd:schema>

```

IMPLEMENTATION

Data Model



This is a diagram of our data model

Please don't be footnotesize

Import

Export

TESTING

unittest

OTHER
