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LTS-SCHEMA.ORG PLUGIN PROTOTYPE

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Contents

- 1. Introduction..... 2
- 2. Implementation 2
 - 2.1. Mark-up Format 2
 - 2.2. XML Elements Mapping 2
 - 2.3. XSLT with Microdata 4
- 3. Evaluation 5
 - 3.1. Validation..... 5
 - 3.2. Extracted Classes 8
- 4. Discussion 8
- Appendix A. An XST Transformation for Event..... 9
- Appendix B. An XML Response of Event from LTS API 11
- Appendix C. An XML Response of Event through Plugin..... 13
- References..... 17

1. Introduction

This document presents the first prototype for LTS-Schema.org plugin. The plugin is designed to consume an XML response obtained from LTS API [1], parsing the XML elements then mapping each element (and attribute) to related class (and property) in Schema.org. Finally, for each mapped element, the related class is inserted by using an XSL Transformation [2].

The outputs of this prototype are:

1. The markup format to be used
2. The mapping between XML element to Schema.org class
3. The XSL Transformation for each mapped element

2. Implementation

For notation, if does not mentioned explicitly, we use “element” to refer to an XML element, “attribute” to refer to an attribute of an XML element, “class” to refer to a class in Schema.org and “property” to refer to a property of a class in Schema.org.

The basic rules implementation to transform the elements to their relevant classes are described as follow:

1. For each element in XML response of LTS API:
 - a. If there is a suitable class found in Schema.org, then use this class to markup this element
2. For each attribute of XML element of LTS API:
 - a. If the attribute has a suitable property in Schema.org, then use the relevant property to markup this attribute, where:
 - i. if the element of the attribute IS NOT related to a class which is cover the relevant property, then introduce a new element to hold the correct class

The solution for each desired output from the previous section will be explained in more detail in the following sub-sections.

2.1. Mark-up Format

There are various formats available to annotate an XML document. Microdata [3] was chosen for its convenient method in interlinking a class to other class, For example, to link a class *Event* to class *Place* though property *location*, then we just need to add attribute *itemprop* into the related XML element.

2.2. XML Elements Mapping

The mapping is representing any relation between XML elements (and attributes) from LTS XML response and classes (and properties) from Schema.org as shown at Table 1.

Table 1 Mapping XML element to Schema.org class

No.	XML Elements / @Attributes	Schema.org	
		Class	Property
1	RespData/Head	Event	
	/Definition/DefinitionLng/@Title		name
2	RespData/Head/Definition	Place	location
	/DefinitionLng/@Location		name
		GeoCoordinates	geo
	@GEP		longitude
	@GNP		latitude
2	RespData/Head/Definition/DefinitionLng	PostalAddress	address
	@Street		streetAddress
	@City		addressLocality
	../@Zip		postalCode
	@EMail		email
	../@Phone		telephone
	@Web		url
3	RespData/Head/Foto		
	@FPath		image
4	RespData/Head/Day		
	{ @Date }T{ @Begin }		startDate
	{ @DateTo }T{ @End }		endDate
5	RespData/Head/Organizer/Head	Organization	organizer
	/Address/AddressLng/@QName		name
	/Address/@Fax		faxNumber
	/Address/@Phone		telephone
	/Address/@EMail		email
	/Address/@Web		url
6	RespData/Head/Organizer/Head/Address	PostalAddress	address
	/AddressLng/@Street		streetAddress
	/AddressLng/@City		addressLocality
	@Zip		postalCode

2.3. XSLT with Microdata

Based on the obtained mapping shown at Table 1, we constructed an XSL transformation as follow:

1. Namespaces declaration

XML responses from the LTS API (see Appendix A) has a specific namespace “*http://tourist.bz.it/data*”. This namespace needs to be declared in the XSL namespaces along with a namespace for Schema.org.

```
<xsl:stylesheet version="1.0"
xmlns="http://tourist.bz.it/data"
xmlns:schema="http://schema.org/"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
```

2. Element to Class transformation

An XSL template can be used to transform the mapping between an element to a related class directly by inserting the microdata’s specific tags (*itemscope*, *itemtype*) and if necessarily the *itemprop* tag to interlinking a class to another class.

```
<xsl:template match="RespData/Head">
  <Head itemscope="" itemtype="http://schema.org/Event">
    ...
    <xsl:apply-templates select="node()|@*" />
  </Head>
</xsl:template>

<xsl:template match="RespData/Head/Organizer/Head">
  <Head itemprop="organizer" itemscope=""
itemtype="http://schema.org/Organization">
    ...
    <xsl:apply-templates select="node()|@*" />
  </Head>
</xsl:template>
```

3. Attribute to Property transformation

A transformation can be implemented by inserting a new XML element by using META tag where its value will be extracted from the value of related attribute.

```
<xsl:template match="RespData/Head/Desc">
  <Desc><xsl:copy-of select="node()|@*" /></Desc>
  <meta itemprop="description" content="{@DValue}" />
</xsl:template>

<xsl:template match="RespData/Head/Day">
  <Day><xsl:copy-of select="node()|@*" /></Day>
  <meta itemprop="startDate" content="{@Date}T{@Begin}" />
  <meta itemprop="endDate" content="{@DateTo}T{@End}" />
</xsl:template>
```

4. A transformation without a relevant Class

A special transformation is required whenever a property has no relevant class. For example, attribute *GEP* in XML is related to property *altitude* Schema.org. Since the property *altitude* is covered by class *GeoCoordinates*, then a meta element to represent class *GeoCoordinates* needs to be inserted first.

```
<xsl:template match="RespData/Head/Definition">
  <Definition itemprop="location" itemscope=""
  itemType="http://schema.org/Place">
    <xsl:apply-templates select="node()|@*" />
    <meta itemprop="name" content="{./DefinitionLng/@Location}" />
    <schema:GeoCoordinates itemprop="geo" itemscope=""
  itemType="http://schema.org/GeoCoordinates">
      <meta itemprop="longitude" content="{@GEP}" />
      <meta itemprop="latitude" content="{@GNP}" />
    </schema:GeoCoordinates>
  </Definition>
</xsl:template>
```

3. Evaluation

For evaluation, we use data about “Event”. We compare XML responses which are obtained directly from LTS API (see Appendix B) and through the plugin (see Appendix C).

3.1. Validation

We use Google Google’s Structured Data Testing Tool [5] and Yandex’s Structured Data Validator [6] to detect and validate the annotated XML responses.

Since the annotated XML responses contain HEAD tag which is ignored by both tools, we temporarily replace this tag with HEADS for validation purpose. The results from tools of Google and Yandex are shown at Figure 1 and Figure 2 respectively.

Structured Data Testing Tool | Google Developers - Chromium

Structured Data Test x Yandex.Webmaster x

https://developers.google.com/structured-data/testing-tool/

Google Developers

Structured Data Testing T... Search

Products > Search > Structured Data > Structured Data Testing Tool

Structured Data Testing Tool

URI abrufen Beispiele VALIDIEREN

Ergebnisse Nach Anwendungsbeispiel filtern

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <RespData Ticks="1216,8078">
3   <Overview PageSize="10" PageAct="1" PagesTotal="175"
4   EventsTotal="1747" SeekID="EC75F3D87F3C48D8993EF42C1F89570F"/>
5   <Heads itemscope="" itemType="http://schema.org/Event"
6     xmlns:schema="http://schema.org/"
7     xmlns="http://tourist.bz.it/data">
8     <meta itemprop="name" content="Wandern durch die
9     Fanesschlucht mit dem Bergführerbüro Globo Alpin"/>
10    <Definition itprop="location" itemscope=""
11      itemType="http://schema.org/Place"
12      OrgID="C64725D7665B470890F3EBE483A60795" Phone="+39 0474 976139"
13      Zip="39034" NatID="IT" Ticket="0"
14      FraID="79CBD72251C911D:8F1490A02427D15E" Active="1" ShowSDat="1"
15      SignOn="1" GEP="12.224300" GNP="46.724100" PayMet="0">
16      <DefinitionLng itprop="address" itemscope=""
17        itemType="http://schema.org/PostalAddress" LngID="de"
18        Title="Wandern durch die Fanesschlucht mit dem Bergführerbüro
19        Globo Alpin" Street="" City="Toblach" Location=""
20        EMail="info@globoalpin.com" Web="http://www.globoalpin.com"
21        Reg="innerhalb des Vortages" MPPlace="">
22        <meta itemprop="streetAddress" content=""/>
23        <meta itemprop="addressLocality"
24        content="Toblach"/>
25        <meta itemprop="postalCode" content="39034"/>
26        <meta itemprop="email"
27        content="info@globoalpin.com"/>
28        <meta itemprop="telephone" content="+39 0474
29        976139"/>
30        <meta itemprop="url"
31        content="http://www.globoalpin.com"/>
32      </DefinitionLng>
33      <meta itemprop="name" content=""/>
34      <schema:GeoCoordinates itprop="geo" itemscope=""
35      itemType="http://schema.org/GeoCoordinates">
36        <meta itemprop="longitude" content="12.224300"/>
37        <meta itemprop="latitude" content="46.724100"/>
38      </schema:GeoCoordinates>
39    </Definition>
40    <Desc DValue="Ein Abenteuer für die ganze Familie
41    Einzigartig ist die Fanesschlucht, entstanden in Millionen von
42    Jahren durch die ungebändigte Kraft des Wassers. Begib dich mit
43    den Bergführern der Globo Alpin in das sagenumwobene Reich der
44    Fanes. Ein einfacher Klettersteig, tosende Wasserfälle, eine
45    mystische Naturlandschaft und vieles mehr sorgen an heißen Tagen
46    für Abkühlung und Spaß bei Jung und Alt."

```

Event 2

name: Festspleie Südtirol 2015: Ausstellung

description: Annemarie Laner;

image: http://tourist.bz.it/DocSite/ImageRender.aspx?ID=5ed9562b9a244f9ed6f306cd379487

startDate: 2015-09-16T09:00:00

endDate: 2015-09-16T20:00:00

startDate: 2015-09-17T09:00:00

endDate: 2015-09-17T20:00:00

startDate: 2015-09-18T09:00:00

endDate: 2015-09-18T20:00:00

startDate: 2015-09-19T09:00:00

endDate: 2015-09-19T20:00:00

startDate: 2015-09-20T09:00:00

endDate: 2015-09-20T20:00:00

location [Place]:

name: Kulturzentrum Grand Hotel

address [PostalAddress]:

addressLocality: Toblach

postalCode: 39034

email: info@grandhotel-toblach.com

telephone: +39 0474 976151

url: http://www.grandhotel-toblach.com

geo [GeoCoordinates]:

longitude: 12.225300

latitude: 46.723600

organizer [Organization]:

name: Kulturzentrum Grand Hotel

faxNumber: +39 0474/976152

telephone: +39 0474/976151

email: info@grandhotel-toblach.com

url: http://www.grandhotel-toblach.com

address [PostalAddress]:

streetAddress: Dolomitenstraße 31

addressLocality: Toblach

postalCode: 39034

offers: Fehlt und wird empfohlen

Event 3

name: Wandungen rund um die Drei Zinnen mit Lanz Iris

Connect Programs Careers Explore

Google I/O Women Techmakers Developer Relations Android

Figure 1 Results from Google's Structured Data Testing Tool

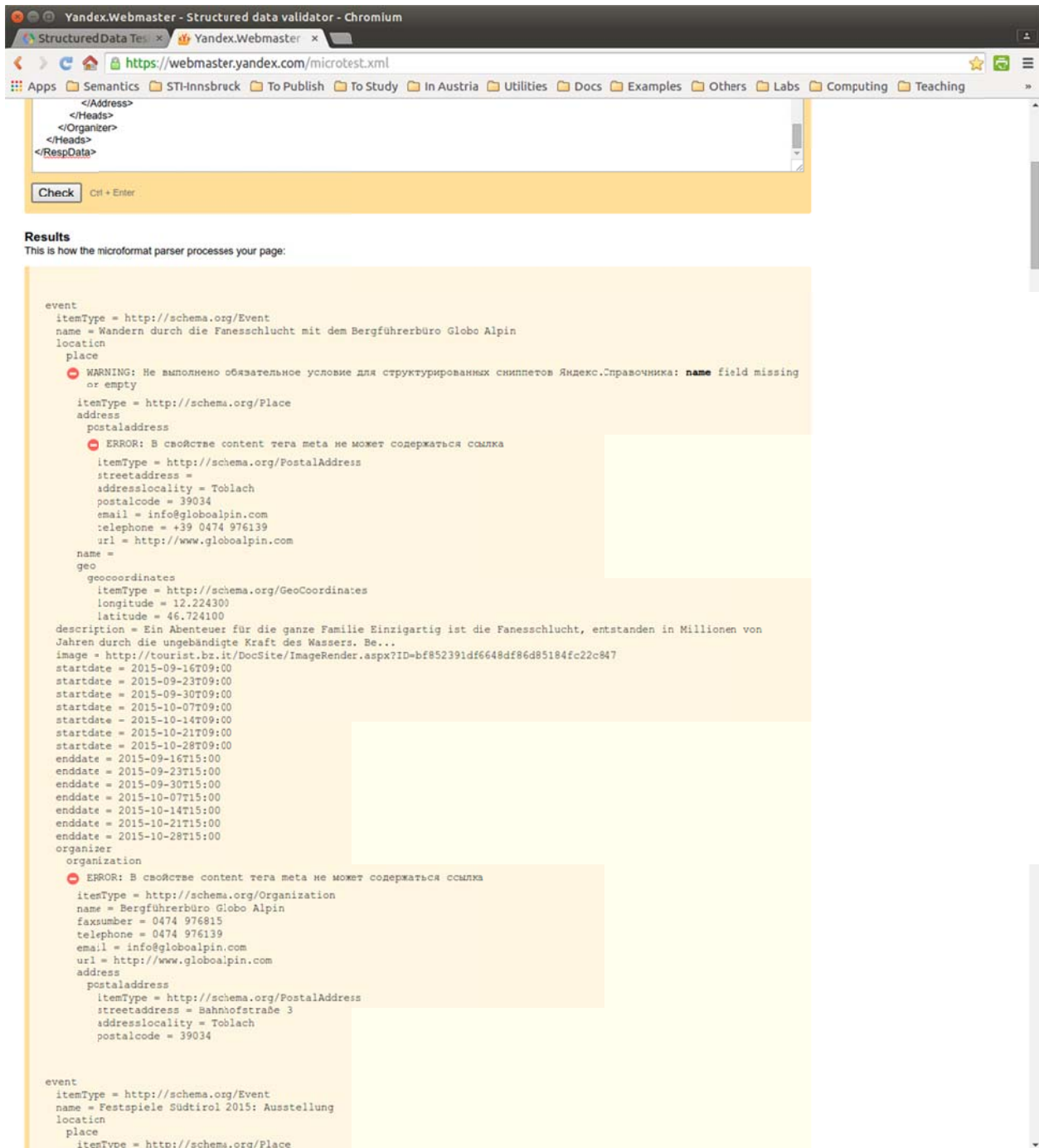


Figure 2 Results from Yandex's Structured Data Validator

3.2. Extracted Classes

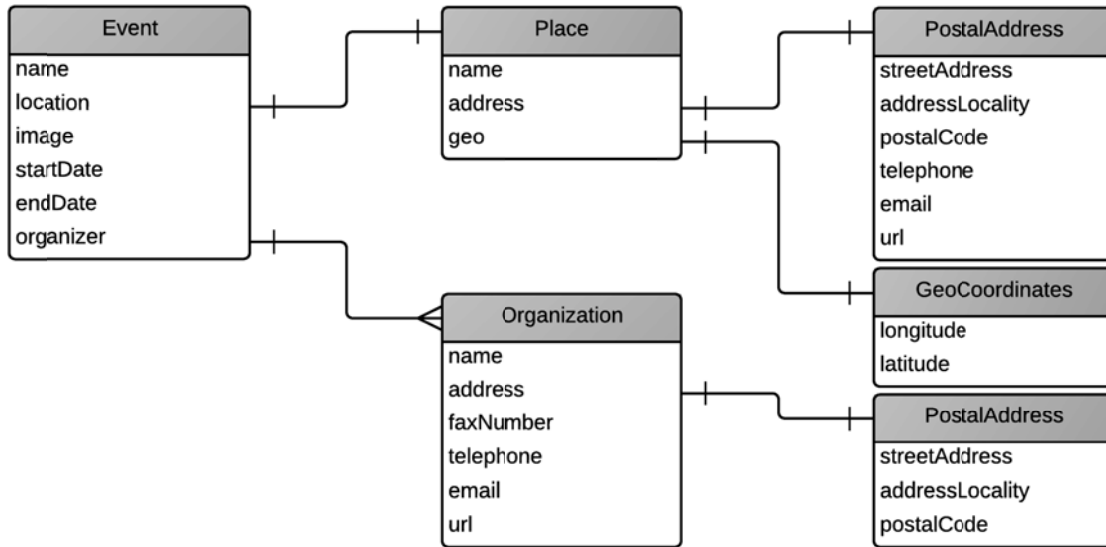


Figure 3 The Diagram of Extracted Classes

As shown at Figure 3, both tools were capable to extract 5 classes (Event, Place, GeoCoordinates, Organization and PostalAddress). An Event might contains one or more “organizer”. There are two different PostalAddress classes, the first one is connected to Event through class Place, while the second one is connected to Organization class.

4. Discussion

Even though we were able to annotate the XML responses from LTS API successfully, there are a few things needs to be considered and discussed:

1. Property “name” is mandatory in class Place. There are a few data, which has empty value (attribute Location of element DefinitionLng).
2. A new XML element was inserted (schema:GeoCoordinates), it requires further investigation if the insertion affects the existing client program.

Appendix A. An XST Transformation for Event

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

<xsl:stylesheet version="1.0"
xmlns="http://tourist.bz.it/data"
xmlns:schema="http://schema.org/"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">

<xsl:output method="xml" version="1.0" encoding="UTF-8" indent="yes"/>

<xsl:template match="node()|@*">
  <xsl:copy><xsl:apply-templates select="node()|@*" /></xsl:copy>
</xsl:template>

<xsl:template match="RespData/Head">
  <Head itemscope="" itemType="http://schema.org/Event">
    <meta itemprop="name" content="{./Definition/DefinitionLng/@Title}" />
    <xsl:apply-templates select="node()|@*" />
  </Head>
</xsl:template>

<xsl:template match="RespData/Head/Definition">
  <Definition itemprop="location" itemscope=""
itemtype="http://schema.org/Place">
    <xsl:apply-templates select="node()|@*" />
    <meta itemprop="name" content="{./DefinitionLng/@Location}" />
    <schema:GeoCoordinates itemprop="geo" itemscope=""
itemtype="http://schema.org/GeoCoordinates">
      <meta itemprop="longitude" content="{@GEP}" />
      <meta itemprop="latitude" content="{@GNP}" />
    </schema:GeoCoordinates>
  </Definition>
</xsl:template>

<xsl:template match="RespData/Head/Definition/DefinitionLng">
  <DefinitionLng itemprop="address" itemscope=""
itemtype="http://schema.org/PostalAddress">
    <xsl:copy-of select="node()|@*" />
    <meta itemprop="streetAddress" content="{@Street}" />
    <meta itemprop="addressLocality" content="{@City}" />
    <meta itemprop="postalCode" content="{../@Zip}" />
    <meta itemprop="email" content="{@EMail}" />
    <meta itemprop="telephone" content="{../@Phone}" />
    <meta itemprop="url" content="{@Web}" />
  </DefinitionLng>
</xsl:template>

<xsl:template match="RespData/Head/Desc">
  <Desc><xsl:copy-of select="node()|@*" /></Desc>
  <meta itemprop="description" content="{@DValue}" />
</xsl:template>

<xsl:template match="RespData/Head/Foto">
  <Foto><xsl:copy-of select="node()|@*" /></Foto>
  <meta itemprop="image" content="{@FPath}" />
</xsl:template>
```

```

</xsl:template>

<xsl:template match="RespData/Head/Day">
  <Day><xsl:copy-of select="node()|@*" /></Day>
  <meta itemprop="startDate" content="{@Date}T{@Begin}" />
  <meta itemprop="endDate" content="{@DateTo}T{@End}" />
</xsl:template>

<xsl:template match="RespData/Head/Organizer/Head">
  <Head itemprop="organizer" itemscope=""
  itemtype="http://schema.org/Organization">
    <meta itemprop="name" content="{./Address/AddressLng/@OName}" />
    <meta itemprop="faxNumber" content="{./Address/@Fax}" />
    <meta itemprop="telephone" content="{./Address/@Phone}" />
    <meta itemprop="email" content="{./Address/@EMail}" />
    <meta itemprop="url" content="{./Address/@Web}" />
    <xsl:apply-templates select="node()|@*" />
  </Head>
</xsl:template>

<xsl:template match="RespData/Head/Organizer/Head/Address">
  <Address itemprop="address" itemscope=""
  itemtype="http://schema.org/PostalAddress">
    <xsl:copy-of select="node()|@*" />
    <meta itemprop="streetAddress" content="{./AddressLng/@Street}" />
    <meta itemprop="addressLocality" content="{./AddressLng/@City}" />
    <meta itemprop="postalCode" content="{@Zip}" />
  </Address>
</xsl:template>

</xsl:stylesheet>

```

Appendix B. An XML Response of Event from LTS API

```
<?xml version="1.0" encoding="UTF-8"?>
<RespData Ticks="62,4004">
  <Overview PageSize="2" PageAct="1" PagesTotal="874" EventsTotal="1747"
  SeekID="7011442533614D2CB15D6E19825FF1B8" />
  <Head EvRID="413D0ED2B966459FBB9599E4DAA13C9F" DefDate="2015-09-16">
    <Definition OrgRID="C64725D7665B470B9DF3EBE483A60795" Phone="+39 0474
    976139" Zip="39034" NatID="IT" Ticket="0"
    FraRID="79CBD72251C911D18F1400A02427D15E" Active="1" ShowSDat="1" SignOn="1"
    GEP="12.224300" GNP="46.724100" PayMet="0">
      <DefinitionLng LngID="de" Title="Wandern durch die Fanesschlucht mit
      dem Bergführerbüro Globo Alpin" Street="" City="Toblach" Location=""
      EMail="info@globoalpin.com" Web="http://www.globoalpin.com" Reg="innerhalb
      des Vortages" MPlace="" />
    </Definition>
    <Desc DValue="Ein Abenteuer für die ganze Familie&#xA;Einzigartig ist
    die Fanesschlucht, entstanden in Millionen von Jahren durch die ungebändigte
    Kraft des Wassers. Begib dich mit den Bergführern der Globo Alpin in das
    sagenumwobene Reich der Fanes. Ein einfacher Klettersteig, tosende
    Wasserfälle, eine mystische Naturlandschaft und vieles mehr sorgen an heißen
    Tagen für Abkühlung und Spaß bei Jung und Alt.&#xA;&#xA;geeignet für Jung und
    Alt&#xA;4 bis 5 Stunden&#xA;4 bis 10 Personen&#xA;&#xA;Preis: auf Anfrage"
    DType="1" LngID="de" />
    <Foto
    FPath="http://tourist.bz.it/DocSite/ImageRender.aspx?ID=bf852391df6648df86d85
    184fc22c847" Order="1" CRight="" />
    <Topic TopRID="ACE8B613F2074A7BB59C0B1DD40A43CD" />
    <Day I6RID="373B943B042A444C890FB6684CAAE6BF" Date="2015-09-16"
    DateTo="2015-09-16" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
    Begin="09:00" End="15:00" Entrance="00:00" />
    <Day I6RID="0E80E48F9C2B4C6F96A3A964F46ED499" Date="2015-09-23"
    DateTo="2015-09-23" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
    Begin="09:00" End="15:00" Entrance="00:00" />
    <Day I6RID="EAF9B7825DE6434AB62A9585DB8CC814" Date="2015-09-30"
    DateTo="2015-09-30" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
    Begin="09:00" End="15:00" Entrance="00:00" />
    <Day I6RID="7AEBEC3F08FD4ED3BDF8BB1FB1946613" Date="2015-10-07"
    DateTo="2015-10-07" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
    Begin="09:00" End="15:00" Entrance="00:00" />
    <Day I6RID="7592644A7D1A462D97E7D6FAA4BF345F" Date="2015-10-14"
    DateTo="2015-10-14" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
    Begin="09:00" End="15:00" Entrance="00:00" />
    <Day I6RID="F50D7A3F47FC49739B329718543C3624" Date="2015-10-21"
    DateTo="2015-10-21" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
    Begin="09:00" End="15:00" Entrance="00:00" />
    <Day I6RID="330B3A82EB19499E9427D6F723B3C56F" Date="2015-10-28"
    DateTo="2015-10-28" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
    Begin="09:00" End="15:00" Entrance="00:00" />
    <District FraRID="404F037C36884004BA706B600444AF1D" />
    <Organizer>
      <Head OrgRID="C64725D7665B470B9DF3EBE483A60795">
        <Address Vat="" Tax="" Zip="39034" Phone="0474 976139" Fax="0474
        976815" Web="http://www.globoalpin.com" EMail="info@globoalpin.com"
        NatID="IT" FName="" LName="">
          <AddressLng LngID="de" Street="Bahnhofstraße 3" City="Toblach"
```

```

OName="Bergführerbüro Globo Alpin" />
  </Address>
  </Head>
  </Organizer>
</Head>
<Head EvRID="685F02CC6EEE4F43B34037FD920D4EA5" DefDate="2015-09-16">
  <Definition OrgRID="844DFBD5F5E7453596F0E7823A1E151A" Phone="+39 0474
976151" Zip="39034" NatID="IT" Ticket="0"
FraRID="79CBD72251C911D18F1400A02427D15E" Active="1" ShowSDat="0" SignOn="0"
GEP="12.225300" GNP="46.723600" PayMet="0">
  <DefinitionLng LngID="de" Title="Festspiele Südtirol 2015:
Ausstellung" Street="" City="Toblach" Location="Kulturzentrum Grand Hotel"
EMail="info@grandhotel-toblach.com" Web="http://www.grandhotel-toblach.com"
Reg="" MPlace="" />
  </Definition>
  <Desc DValue="Annemarie Laner: &quot;You never walk alone&quot; -
Ausstellung im Rahmen der Festspiele.&#xA;Vernisage: 06.08.2015 um 17.30 Uhr
im Foyer 1. Stock." DType="1" LngID="de" />
  <Foto
FPath="http://tourist.bz.it/DocSite/ImageRender.aspx?ID=5ed9562b9a2f42ff9ed6f
306cd379487" Order="1" CRight="" />
  <Topic TopRID="C72CE969B98947FABC99CBC7B033F28E" />
  <Day I6RID="01AE79910CC24F7C980BEC8D52F4CB9E" Date="2015-09-16"
DateTo="2015-09-16" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00" />
  <Day I6RID="5E5C5E7C12D44736BD41DBEFEA0DA105" Date="2015-09-17"
DateTo="2015-09-17" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00" />
  <Day I6RID="5345D6D0F9F04D639505C797D82695F3" Date="2015-09-18"
DateTo="2015-09-18" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00" />
  <Day I6RID="5E134E90FF7F416A9A00C3D4E6A1C958" Date="2015-09-19"
DateTo="2015-09-19" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00" />
  <Day I6RID="C5CA8183F3424574BB1BDB5808FDFF6B" Date="2015-09-20"
DateTo="2015-09-20" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00" />
  <District FraRID="404F037C36884004BA706B600444AF1D" />
  <Organizer>
  <Head OrgRID="844DFBD5F5E7453596F0E7823A1E151A">
    <Address Vat="" Tax="" Zip="39034" Phone="+39 0474/976151"
Fax="+39 0474/976152" Web="http://www.grandhotel-toblach.com"
EMail="info@grandhotel-toblach.com" NatID="IT" FName="" LName="Kulturzentrum
Grand Hotel Toblach">
      <AddressLng LngID="de" Street="Dolomitenstraße 31"
City="Toblach" OName="Kulturzentrum Grand Hotel" />
    </Address>
  </Head>
  </Organizer>
</Head>
</RespData>

```

Appendix C. An XML Response of Event through Plugin

```
<?xml version="1.0" encoding="UTF-8"?>
<RespData Ticks="1326,0085">
  <Overview PageSize="2" PageAct="1" PagesTotal="874" EventsTotal="1747"
  SeekID="E81197CFD1244235BAFBD5E4C7B2C527"/>
  <Head itemscope="" itemType="http://schema.org/Event"
  xmlns:schema="http://schema.org/"
  xmlns="http://tourist.bz.it/data">
    <meta itemprop="name" content="Wandern durch die Fanesschlucht mit
    dem Bergführerbüro Globo Alpin"/>
    <Definition itemprop="location" itemscope=""
    itemType="http://schema.org/Place" OrgRID="C64725D7665B470B9DF3EBE483A60795"
    Phone="+39 0474 976139" Zip="39034" NatID="IT" Ticket="0"
    FraRID="79CBD72251C911D18F1400A02427D15E" Active="1" ShowSDat="1" SignOn="1"
    GEP="12.224300" GNP="46.724100" PayMet="0">
      <DefinitionLng itemprop="address" itemscope=""
      itemType="http://schema.org/PostalAddress" LngID="de" Title="Wandern durch
      die Fanesschlucht mit dem Bergführerbüro Globo Alpin" Street=""
      City="Toblach" Location="" EMail="info@globoalpin.com"
      Web="http://www.globoalpin.com" Reg="innerhalb des Vortages" MPlace="">
        <meta itemprop="streetAddress" content=""/>
        <meta itemprop="addressLocality" content="Toblach"/>
        <meta itemprop="postalCode" content="39034"/>
        <meta itemprop="email" content="info@globoalpin.com"/>
        <meta itemprop="telephone" content="+39 0474 976139"/>
        <meta itemprop="url" content="http://www.globoalpin.com"/>
      </DefinitionLng>
      <meta itemprop="name" content=""/>
      <schema:GeoCoordinates itemprop="geo" itemscope=""
      itemType="http://schema.org/GeoCoordinates">
        <meta itemprop="longitude" content="12.224300"/>
        <meta itemprop="latitude" content="46.724100"/>
      </schema:GeoCoordinates>
    </Definition>
    <Desc DValue="Ein Abenteuer für die ganze Familie
    Einzigartig ist die Fanesschlucht, entstanden in Millionen von Jahren durch
    die ungebändigte Kraft des Wassers. Begib dich mit den Bergführern der Globo
    Alpin in das sagenumwobene Reich der Fanes. Ein einfacher Klettersteig,
    tosende Wasserfälle, eine mystische Naturlandschaft und vieles mehr sorgen an
    heißen Tagen für Abkühlung und Spaß bei Jung und Alt.

    geeignet für Jung und Alt
    4 bis 5 Stunden
    4 bis 10 Personen

    Preis: auf Anfrage" DType="1" LngID="de"/>
      <meta itemprop="description" content="Ein Abenteuer für die ganze
      Familie
      Einzigartig ist die Fanesschlucht, entstanden in Millionen von Jahren durch
      die ungebändigte Kraft des Wassers. Begib dich mit den Bergführern der Globo
      Alpin in das sagenumwobene Reich der Fanes. Ein einfacher Klettersteig,
      tosende Wasserfälle, eine mystische Naturlandschaft und vieles mehr sorgen an
      heißen Tagen für Abkühlung und Spaß bei Jung und Alt.

      geeignet für Jung und Alt
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4 bis 5 Stunden
4 bis 10 Personen

Preis: auf Anfrage"/>

<Foto

FPath="http://tourist.bz.it/DocSite/ImageRender.aspx?ID=bf852391df6648df86d85184fc22c847" Order="1" CRight=""/>

<meta itemprop="image"

content="http://tourist.bz.it/DocSite/ImageRender.aspx?ID=bf852391df6648df86d85184fc22c847"/>

<Topic TopRID="ACE8B613F2074A7BB59C0B1DD40A43CD"/>

<Day I6RID="373B943B042A444C890FB6684CAAE6BF" Date="2015-09-16" DateTo="2015-09-16" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1" Begin="09:00" End="15:00" Entrance="00:00"/>

<meta itemprop="startDate" content="2015-09-16T09:00"/>

<meta itemprop="endDate" content="2015-09-16T15:00"/>

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<meta itemprop="startDate" content="2015-09-23T09:00"/>

<meta itemprop="endDate" content="2015-09-23T15:00"/>

<Day I6RID="EAF9B7825DE6434AB62A9585DB8CC814" Date="2015-09-30" DateTo="2015-09-30" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1" Begin="09:00" End="15:00" Entrance="00:00"/>

<meta itemprop="startDate" content="2015-09-30T09:00"/>

<meta itemprop="endDate" content="2015-09-30T15:00"/>

<Day I6RID="7AEBEC3F08FD4ED3BDF8BB1FB1946613" Date="2015-10-07" DateTo="2015-10-07" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1" Begin="09:00" End="15:00" Entrance="00:00"/>

<meta itemprop="startDate" content="2015-10-07T09:00"/>

<meta itemprop="endDate" content="2015-10-07T15:00"/>

<Day I6RID="7592644A7D1A462D97E7D6FAA4BF345F" Date="2015-10-14" DateTo="2015-10-14" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1" Begin="09:00" End="15:00" Entrance="00:00"/>

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<meta itemprop="endDate" content="2015-10-14T15:00"/>

<Day I6RID="F50D7A3F47FC49739B329718543C3624" Date="2015-10-21" DateTo="2015-10-21" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1" Begin="09:00" End="15:00" Entrance="00:00"/>

<meta itemprop="startDate" content="2015-10-21T09:00"/>

<meta itemprop="endDate" content="2015-10-21T15:00"/>

<Day I6RID="330B3A82EB19499E9427D6F723B3C56F" Date="2015-10-28" DateTo="2015-10-28" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1" Begin="09:00" End="15:00" Entrance="00:00"/>

<meta itemprop="startDate" content="2015-10-28T09:00"/>

<meta itemprop="endDate" content="2015-10-28T15:00"/>

<District FraRID="404F037C36884004BA706B600444AF1D"/>

<Organizer>

<Head itemprop="organizer" itemscope=""

itemtype="http://schema.org/Organization">

<meta itemprop="name" content="Bergführerbüro Globo Alpin"/>

<meta itemprop="faxNumber" content="0474 976815"/>

<meta itemprop="telephone" content="0474 976139"/>

<meta itemprop="email" content="info@globoalpin.com"/>

<meta itemprop="url" content="http://www.globoalpin.com"/>

<Address itemprop="address" itemscope=""

itemtype="http://schema.org/PostalAddress" Vat="" Tax="" Zip="39034"

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Phone="0474 976139" Fax="0474 976815" Web="http://www.globoalpin.com"
EMail="info@globoalpin.com" NatID="IT" FName="" LName=""
    <AddressLng LngID="de" Street="Bahnhofstraße 3"
City="Toblach" OName="Bergführerbüro Globo Alpin"/>
    <meta itemprop="streetAddress" content="Bahnhofstraße
3"/>
    <meta itemprop="addressLocality" content="Toblach"/>
    <meta itemprop="postalCode" content="39034"/>
    </Address>
  </Head>
</Organizer>
</Head>
<Head itemscope="" itemType="http://schema.org/Event"
  xmlns:schema="http://schema.org/"
  xmlns="http://tourist.bz.it/data">
  <meta itemprop="name" content="Festspiele Südtirol 2015:
Ausstellung"/>
  <Definition itemprop="location" itemscope=""
itemType="http://schema.org/Place" OrgRID="844DFBD5F5E7453596F0E7823A1E151A"
Phone="+39 0474 976151" Zip="39034" NatID="IT" Ticket="0"
FraRID="79CBD72251C911D18F1400A02427D15E" Active="1" ShowSDat="0" SignOn="0"
GEP="12.225300" GNP="46.723600" PayMet="0">
  <DefinitionLng itemprop="address" itemscope=""
itemType="http://schema.org/PostalAddress" LngID="de" Title="Festspiele
Südtirol 2015: Ausstellung" Street="" City="Toblach" Location="Kulturzentrum
Grand Hotel" EMail="info@grandhotel-toblach.com" Web="http://www.grandhotel-
toblach.com" Reg="" MPlace="">
    <meta itemprop="streetAddress" content=""/>
    <meta itemprop="addressLocality" content="Toblach"/>
    <meta itemprop="postalCode" content="39034"/>
    <meta itemprop="email" content="info@grandhotel-
toblach.com"/>
    <meta itemprop="telephone" content="+39 0474 976151"/>
    <meta itemprop="url" content="http://www.grandhotel-
toblach.com"/>
  </DefinitionLng>
  <meta itemprop="name" content="Kulturzentrum Grand Hotel"/>
  <schema:GeoCoordinates itemprop="geo" itemscope=""
itemType="http://schema.org/GeoCoordinates">
    <meta itemprop="longitude" content="12.225300"/>
    <meta itemprop="latitude" content="46.723600"/>
  </schema:GeoCoordinates>
</Definition>
  <Desc DValue="Annemarie Laner: "You never walk alone" - Ausstellung
im Rahmen der Festspiele.
Vernisage: 06.08.2015 um 17.30 Uhr im Foyer 1. Stock." DType="1" LngID="de"/>
  <meta itemprop="description" content="Annemarie Laner: "You never
walk alone" - Ausstellung im Rahmen der Festspiele.
Vernisage: 06.08.2015 um 17.30 Uhr im Foyer 1. Stock."/>
  <Foto
FPath="http://tourist.bz.it/DocSite/ImageRender.aspx?ID=5ed9562b9a2f42ff9ed6f
306cd379487" Order="1" CRight=""/>
    <meta itemprop="image"
content="http://tourist.bz.it/DocSite/ImageRender.aspx?ID=5ed9562b9a2f42ff9ed
6f306cd379487"/>
    <Topic TopRID="C72CE969B98947FABC99CBC7B033F28E"/>
    <Day I6RID="01AE79910CC24F7C980BEC8D52F4CB9E" Date="2015-09-16"

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DateTo="2015-09-16" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00"/>
  <meta itemp="startDate" content="2015-09-16T09:00"/>
  <meta itemp="endDate" content="2015-09-16T20:00"/>
  <Day I6RID="5E5C5E7C12D44736BD41DBEFEA0DA105" Date="2015-09-17"
DateTo="2015-09-17" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00"/>
  <meta itemp="startDate" content="2015-09-17T09:00"/>
  <meta itemp="endDate" content="2015-09-17T20:00"/>
  <Day I6RID="5345D6D0F9F04D639505C797D82695F3" Date="2015-09-18"
DateTo="2015-09-18" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00"/>
  <meta itemp="startDate" content="2015-09-18T09:00"/>
  <meta itemp="endDate" content="2015-09-18T20:00"/>
  <Day I6RID="5E134E90FF7F416A9A00C3D4E6A1C958" Date="2015-09-19"
DateTo="2015-09-19" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00"/>
  <meta itemp="startDate" content="2015-09-19T09:00"/>
  <meta itemp="endDate" content="2015-09-19T20:00"/>
  <Day I6RID="C5CA8183F3424574BB1BDB5808FDF6B" Date="2015-09-20"
DateTo="2015-09-20" Active="1" SingleDays="0" MinP="0" MaxP="0" Ticket="1"
Begin="09:00" End="20:00" Entrance="00:00"/>
  <meta itemp="startDate" content="2015-09-20T09:00"/>
  <meta itemp="endDate" content="2015-09-20T20:00"/>
  <District FraRID="404F037C36884004BA706B600444AF1D"/>
  <Organizer>
    <Head itemp="organizer" itemscope=""
itemtype="http://schema.org/Organization">
      <meta itemp="name" content="Kulturzentrum Grand Hotel"/>
      <meta itemp="faxNumber" content="+39 0474/976152"/>
      <meta itemp="telephone" content="+39 0474/976151"/>
      <meta itemp="email" content="info@grandhotel-
toblach.com"/>
      <meta itemp="url" content="http://www.grandhotel-
toblach.com"/>
      <Address itemp="address" itemscope=""
itemtype="http://schema.org/PostalAddress" Vat="" Tax="" Zip="39034"
Phone="+39 0474/976151" Fax="+39 0474/976152" Web="http://www.grandhotel-
toblach.com" EMail="info@grandhotel-toblach.com" NatID="IT" FName=""
LName="Kulturzentrum Grand Hotel Toblach">
        <AddressLng lngID="de" Street="Dolomitenstraße 31"
City="Toblach" OName="Kulturzentrum Grand Hotel"/>
        <meta itemp="streetAddress" content="Dolomitenstraße
31"/>
        <meta itemp="addressLocality" content="Toblach"/>
        <meta itemp="postalCode" content="39034"/>
      </Address>
    </Head>
  </Organizer>
</Head>
</RespData>

```

References

- [1] LTS, “Documentation of Event API”, October 2014
- [2] W3C, “XSL Transformations (XSLT)”, <http://www.w3.org/TR/xslt>
- [3] W3C, “HTML Microdata”, <http://www.w3.org/TR/microdata/>
- [4] Google’s Structured Data Testing Tool , <https://developers.google.com/structured-data/testing-tool/>
- [5] Yandex’s Structured Data Validator, <https://webmaster.yandex.com/microtest.xml>