VOEvents for Solar System Sciences
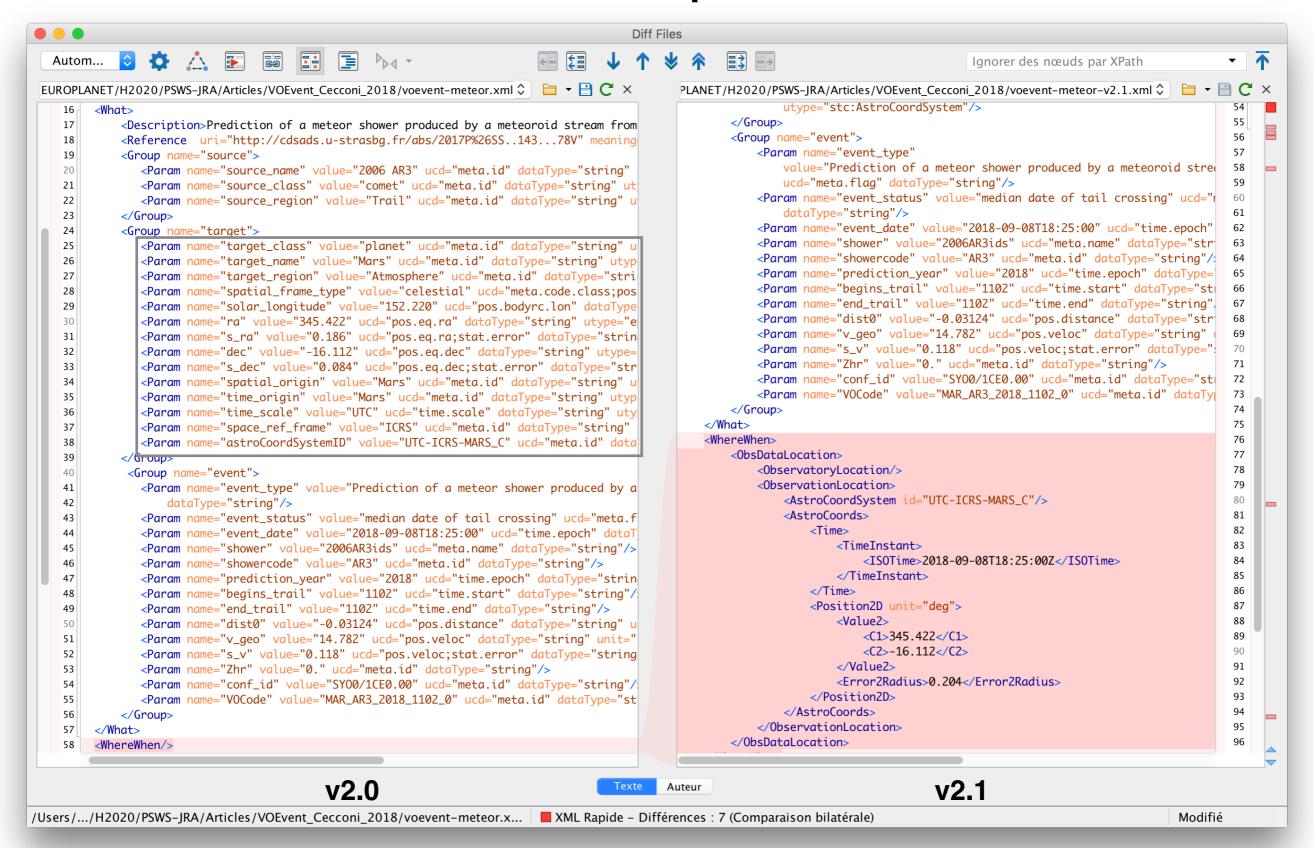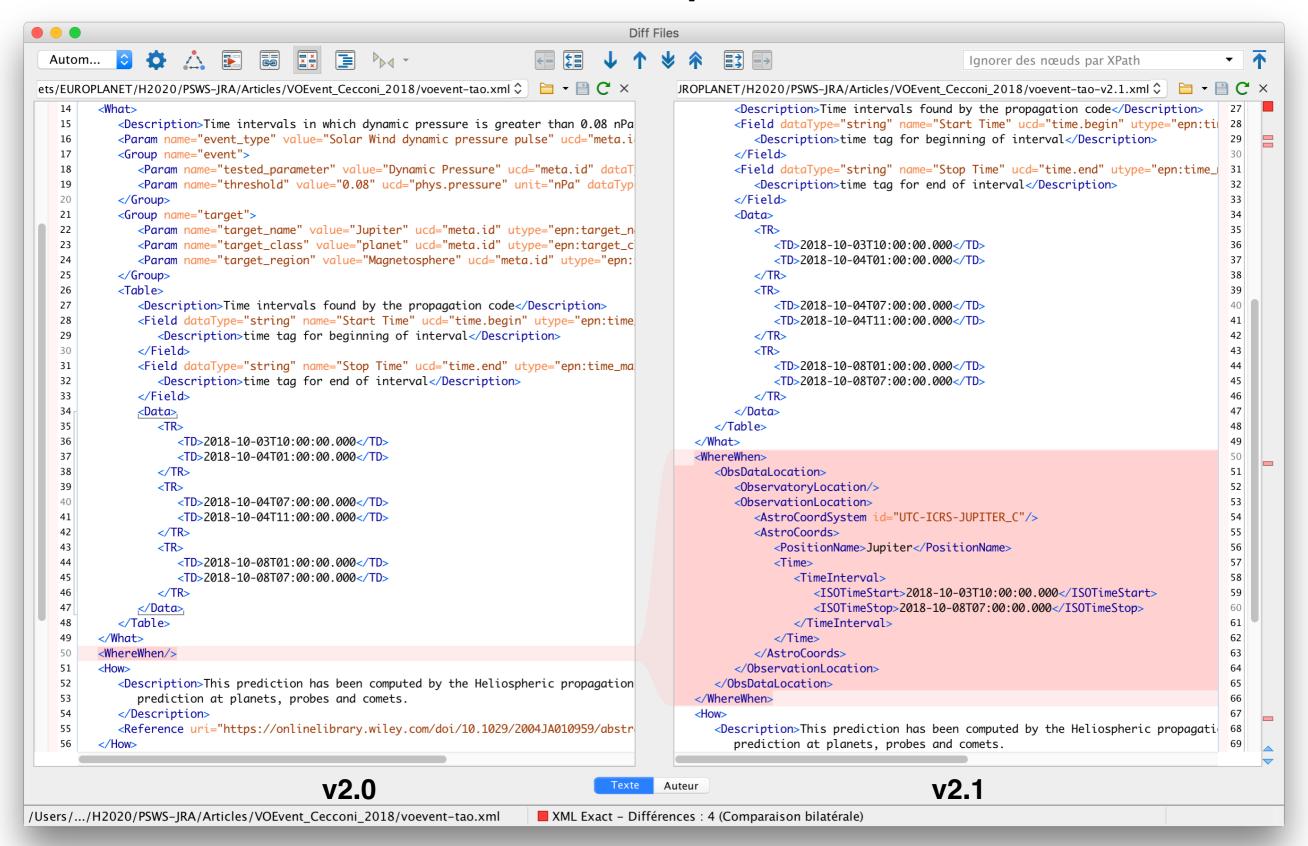
- Three needs identified (Cecconi et al., 2018arXiv181112680):
(a) The capability to **specify the only target name as a location**. It can be a planet, a satellite, a comet, a moon, a spacecraft, a rover, etc. Standard names should be used here, such as IAU names for natural bodies.
(b) The capability to **specify the location using a planetary body reference frame**, or in a reference frame related to an object in the Solar System.
(c) The capability to **specify a time range**, with a start and end time.

- It is proposed to:
- define reference frames in the VOEvent (or name community well-known ones), as proposed by STC.
- allow solar system body names (from using standard IAU) as positions.
- define a time interval element
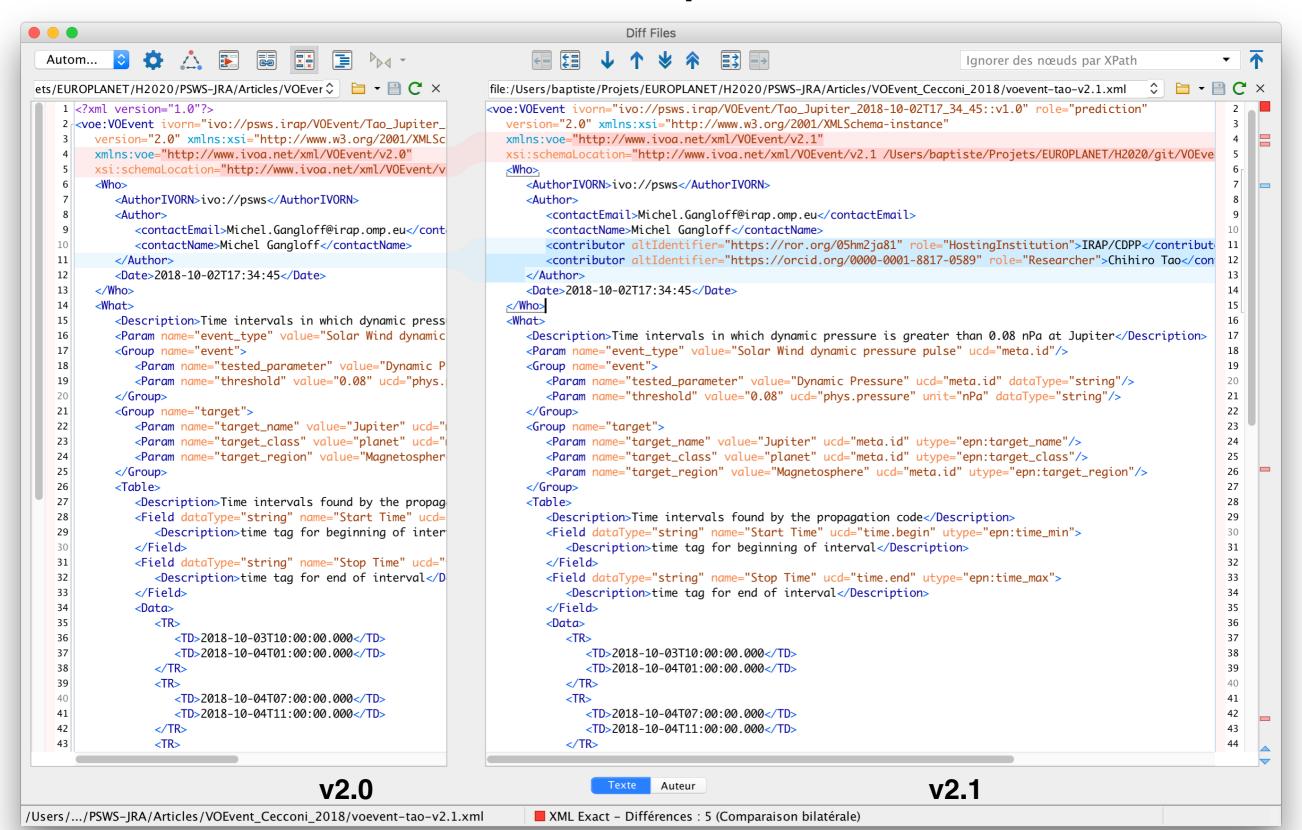
Examples

Examples

v2.0

v2.1

VOEvents
for Solar System Sciences

- Notes:
  - The current list of allowed coordinate system names is too restrictive (and difficult to extend with all cases).
  - The list of coordinate systems that should be used in the VOEvent should be maintained outside the VOEvent standard (pass the ball to semantics?)

- Enhance contributor element with *ivorn*, *altIdentifier* (for ORCID or ROR id) and *role* (from Datacite Metadata Schema 4.3)
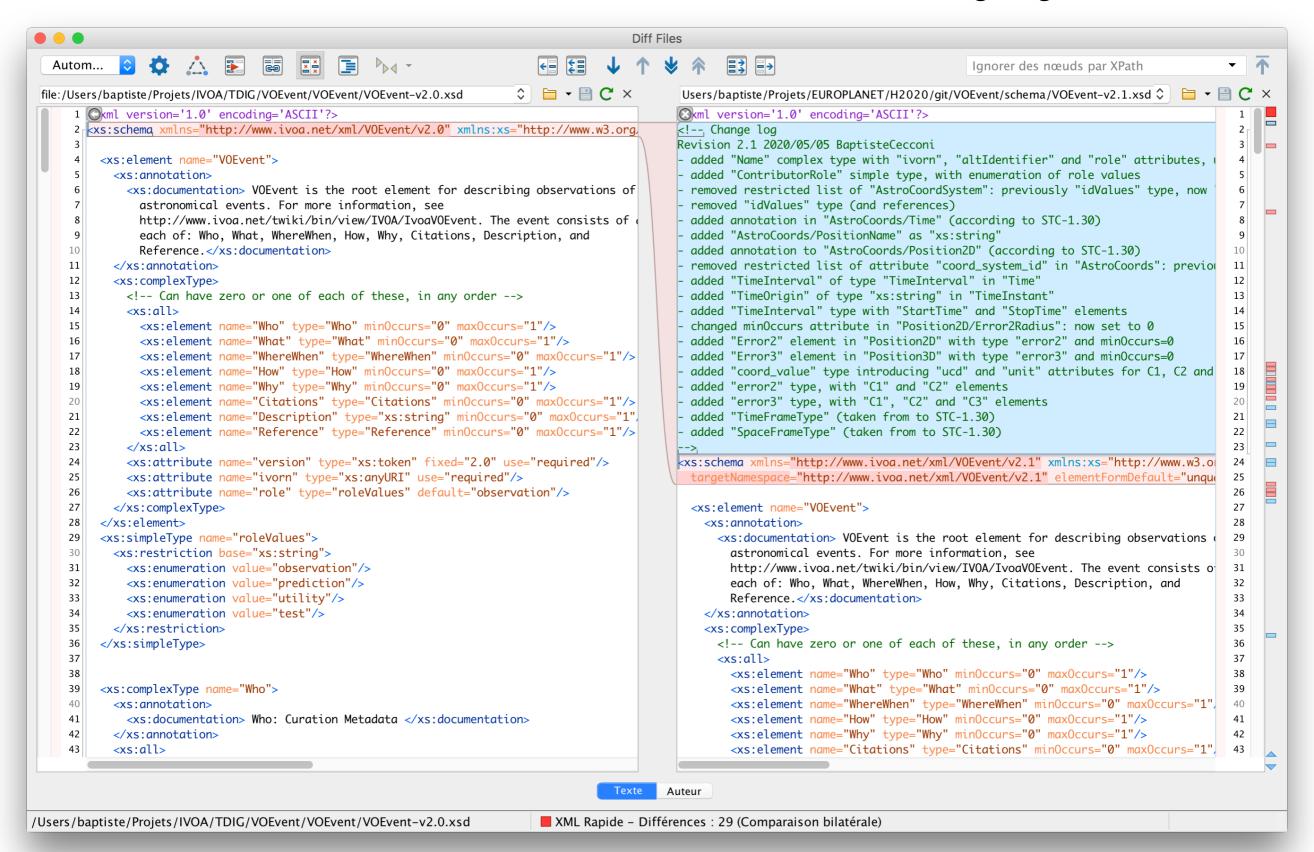
Examples

VOEvents
for Solar System Sciences

- Proposed V2.1:
  - allow to define AstroCoordSystem (TimeFrame and SpaceFrame). List of valid identifiers is removed.
  - added "ivorn", "altIdentifier" and "role" attributes in contributor element (*)
  - added "ucd" and "pos_unit" attributes to positional coordinate value elements.
  - added positional error in 2D and 3D, in addition to the Error2Radius element.

  (*) Not applied to contactName (although it would be nice), since it would be incompatible with the IVOA Resource Metadata specification.

- The new XML Schema is backward compliant: previous valid XML VOEvents should be valid with the new schema.
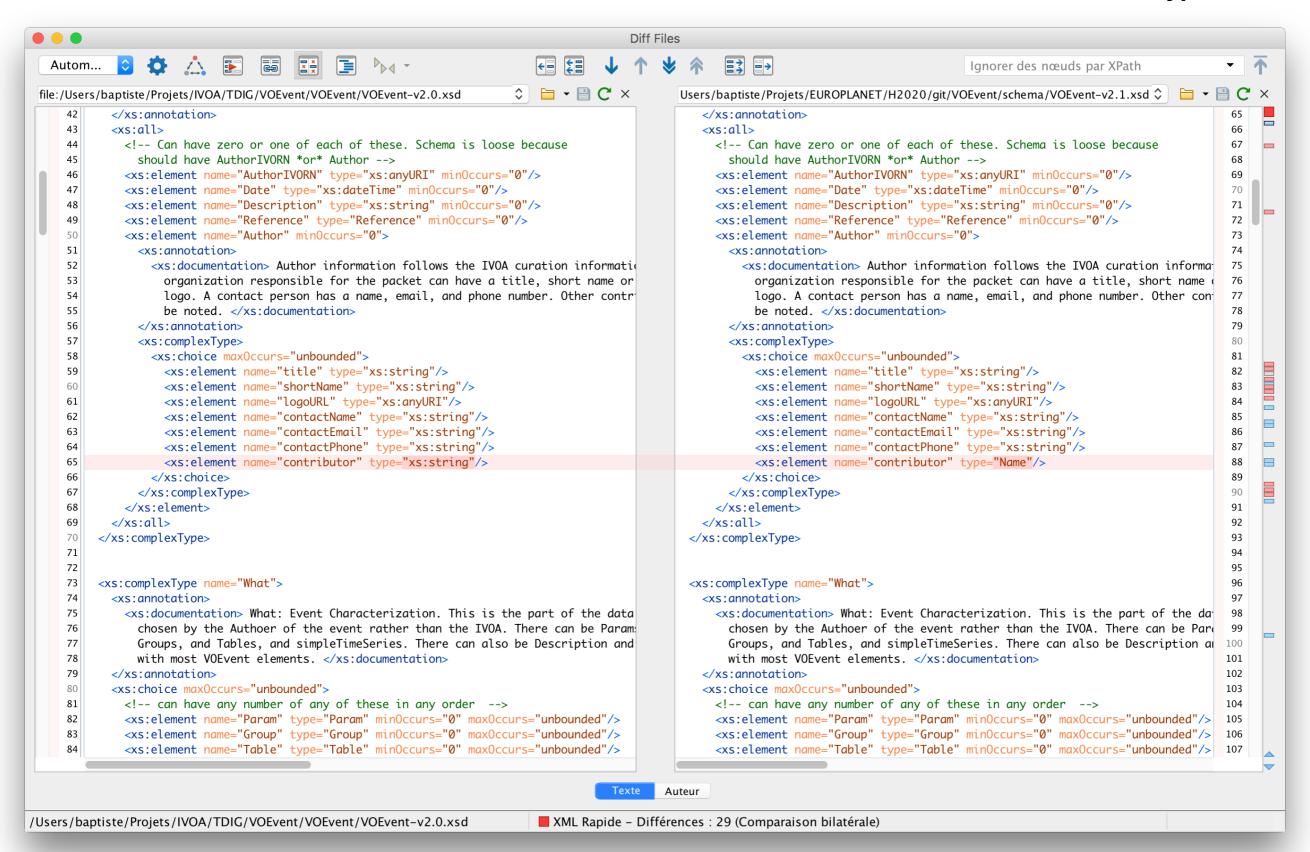
VOEvent document content update

- *Some links and tools are outdated or disappeared from google…* Now using peer-reviewed references (and/or URL was footnotes)

- Added paragraphs on Solar System needs, and new concepts defined.

- Including the schema is questionable: *The XML Schema is not normative (explicitly written), but since it is in the document, it has been used to validate VOEvents in brokers, thus blocking further some features not present in the schema.*

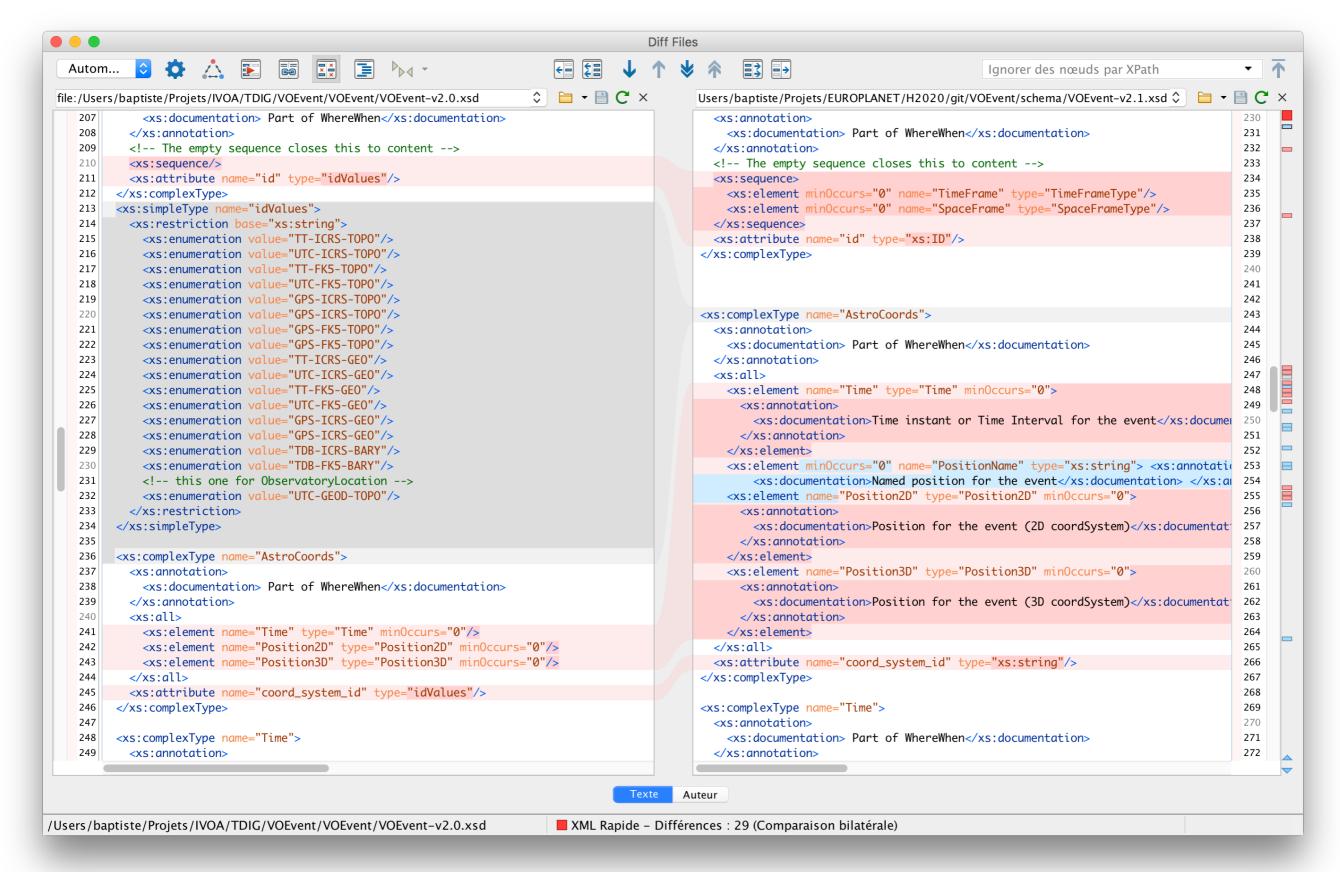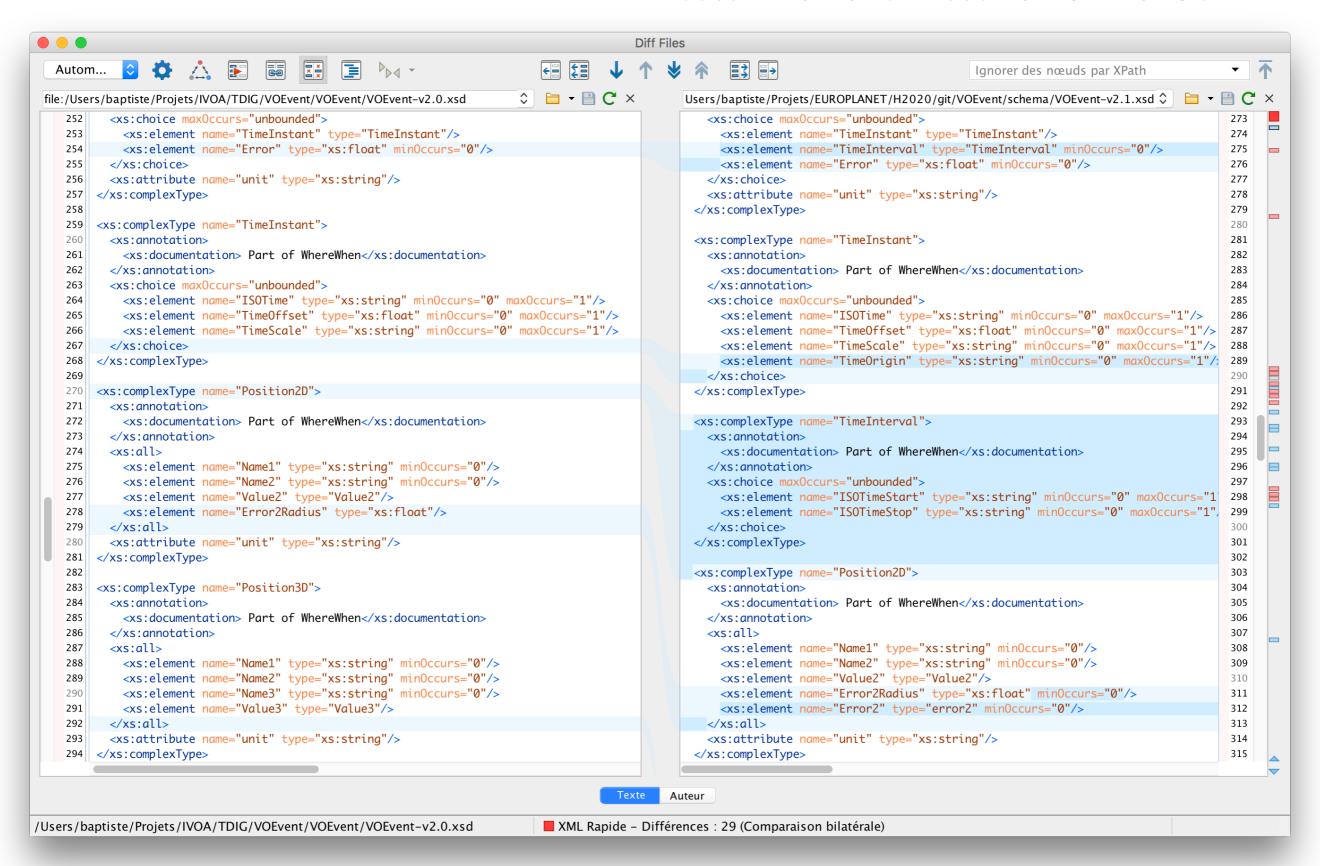- Pull Request of version 2.1 of VOEvent doc submitted on Github

Added ChangeLog

Diff Files

Autom... | Ignorer des nœuds par XPath

file:/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd | Users/baptiste/Projets/EUROPLANET/H2020/git/VOEvent/schema/VOEvent-v2.1.xsd

Left pane:
```
 1  <?xml version='1.0' encoding='ASCII'?>
 2  <xs:schema xmlns="http://www.ivoa.net/xml/VOEvent/v2.0" xmlns:xs="http://www.w3.org/
 3
 4    <xs:element name="VOEvent">
 5      <xs:annotation>
 6        <xs:documentation> VOEvent is the root element for describing observations of
 7          astronomical events. For more information, see
 8          http://www.ivoa.net/twiki/bin/view/IVOA/IvoaVOEvent. The event consists of
 9          each of: Who, What, WhereWhen, How, Why, Citations, Description, and
10          Reference.</xs:documentation>
11      </xs:annotation>
12      <xs:complexType>
13        <!-- Can have zero or one of each of these, in any order -->
14        <xs:all>
15          <xs:element name="Who" type="Who" minOccurs="0" maxOccurs="1"/>
16          <xs:element name="What" type="What" minOccurs="0" maxOccurs="1"/>
17          <xs:element name="WhereWhen" type="WhereWhen" minOccurs="0" maxOccurs="1"/>
18          <xs:element name="How" type="How" minOccurs="0" maxOccurs="1"/>
19          <xs:element name="Why" type="Why" minOccurs="0" maxOccurs="1"/>
20          <xs:element name="Citations" type="Citations" minOccurs="0" maxOccurs="1"/>
21          <xs:element name="Description" type="xs:string" minOccurs="0" maxOccurs="1"
22          <xs:element name="Reference" type="Reference" minOccurs="0" maxOccurs="1"/>
23        </xs:all>
24        <xs:attribute name="version" type="xs:token" fixed="2.0" use="required"/>
25        <xs:attribute name="ivorn" type="xs:anyURI" use="required"/>
26        <xs:attribute name="role" type="roleValues" default="observation"/>
27      </xs:complexType>
28    </xs:element>
29    <xs:simpleType name="roleValues">
30      <xs:restriction base="xs:string">
31        <xs:enumeration value="observation"/>
32        <xs:enumeration value="prediction"/>
33        <xs:enumeration value="utility"/>
34        <xs:enumeration value="test"/>
35      </xs:restriction>
36    </xs:simpleType>
37
38    <xs:complexType name="Who">
39      <xs:annotation>
40        <xs:documentation> Who: Curation Metadata </xs:documentation>
41      </xs:annotation>
42      <xs:all>
43
```

Right pane:
```
 1  <?xml version='1.0' encoding='ASCII'?>
 2  <!-- Change log
 3  Revision 2.1 2020/05/05 BaptisteCecconi
 4  - added "Name" complex type with "ivorn", "altIdentifier" and "role" attributes,
 5  - added "ContributorRole" simple type, with enumeration of role values
 6  - removed restricted list of "AstroCoordSystem": previously "idValues" type, now
 7  - removed "idValues" type (and references)
 8  - added annotation in "AstroCoords/Time" (according to STC-1.30)
 9  - added "AstroCoords/PositionName" as "xs:string"
10  - added annotation to "AstroCoords/Position2D" (according to STC-1.30)
11  - removed restricted list of attribute "coord_system_id" in "AstroCoords": previo
12  - added "TimeInterval" of type "TimeInterval" in "Time"
13  - added "TimeOrigin" of type "xs:string" in "TimeInstant"
14  - added "TimeInterval" type with "StartTime" and "StopTime" elements
15  - changed minOccurs attribute in "Position2D/Error2Radius": now set to 0
16  - added "Error2" element in "Position2D" with type "error2" and minOccurs=0
17  - added "Error3" element in "Position3D" with type "error3" and minOccurs=0
18  - added "coord_value" type introducing "ucd" and "unit" attributes for C1, C2 and
19  - added "error2" type, with "C1" and "C2" elements
20  - added "error3" type, with "C1", "C2" and "C3" elements
21  - added "TimeFrameType" (taken from to STC-1.30)
22  - added "SpaceFrameType" (taken from to STC-1.30)
23  -->
24  <xs:schema xmlns="http://www.ivoa.net/xml/VOEvent/v2.1" xmlns:xs="http://www.w3.o
25    targetNamespace="http://www.ivoa.net/xml/VOEvent/v2.1" elementFormDefault="unqu
26
27    <xs:element name="VOEvent">
28      <xs:annotation>
29        <xs:documentation> VOEvent is the root element for describing observations
30          astronomical events. For more information, see
31          http://www.ivoa.net/twiki/bin/view/IVOA/IvoaVOEvent. The event consists o
32          each of: Who, What, WhereWhen, How, Why, Citations, Description, and
33          Reference.</xs:documentation>
34      </xs:annotation>
35      <xs:complexType>
36        <!-- Can have zero or one of each of these, in any order -->
37        <xs:all>
38          <xs:element name="Who" type="Who" minOccurs="0" maxOccurs="1"/>
39          <xs:element name="What" type="What" minOccurs="0" maxOccurs="1"/>
40          <xs:element name="WhereWhen" type="WhereWhen" minOccurs="0" maxOccurs="1"
41          <xs:element name="How" type="How" minOccurs="0" maxOccurs="1"/>
42          <xs:element name="Why" type="Why" minOccurs="0" maxOccurs="1"/>
43          <xs:element name="Citations" type="Citations" minOccurs="0" maxOccurs="1"
```

Texte | Auteur

/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd | XML Rapide – Différences : 29 (Comparaison bilatérale)

ContactName and contributor => Name type

Autom...

Ignorer des nœuds par XPath

file:/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd

Users/baptiste/Projets/EUROPLANET/H2020/git/VOEvent/schema/VOEvent-v2.1.xsd

Left pane (VOEvent-v2.0.xsd):

```
42      </xs:annotation>
43      <xs:all>
44        <!-- Can have zero or one of each of these. Schema is loose because
45          should have AuthorIVORN *or* Author -->
46        <xs:element name="AuthorIVORN" type="xs:anyURI" minOccurs="0"/>
47        <xs:element name="Date" type="xs:dateTime" minOccurs="0"/>
48        <xs:element name="Description" type="xs:string" minOccurs="0"/>
49        <xs:element name="Reference" type="Reference" minOccurs="0"/>
50        <xs:element name="Author" minOccurs="0">
51          <xs:annotation>
52            <xs:documentation> Author information follows the IVOA curation informati
53              organization responsible for the packet can have a title, short name or
54              logo. A contact person has a name, email, and phone number. Other contr
55              be noted. </xs:documentation>
56          </xs:annotation>
57          <xs:complexType>
58            <xs:choice maxOccurs="unbounded">
59              <xs:element name="title" type="xs:string"/>
60              <xs:element name="shortName" type="xs:string"/>
61              <xs:element name="logoURL" type="xs:anyURI"/>
62              <xs:element name="contactName" type="xs:string"/>
63              <xs:element name="contactEmail" type="xs:string"/>
64              <xs:element name="contactPhone" type="xs:string"/>
65              <xs:element name="contributor" type="xs:string"/>
66            </xs:choice>
67          </xs:complexType>
68        </xs:element>
69      </xs:all>
70    </xs:complexType>
71
72
73    <xs:complexType name="What">
74      <xs:annotation>
75        <xs:documentation> What: Event Characterization. This is the part of the data
76          chosen by the Authoer of the event rather than the IVOA. There can be Param
77          Groups, and Tables, and simpleTimeSeries. There can also be Description and
78          with most VOEvent elements. </xs:documentation>
79      </xs:annotation>
80      <xs:choice maxOccurs="unbounded">
81        <!-- can have any number of any of these in any order  -->
82        <xs:element name="Param" type="Param" minOccurs="0" maxOccurs="unbounded"/>
83        <xs:element name="Group" type="Group" minOccurs="0" maxOccurs="unbounded"/>
84        <xs:element name="Table" type="Table" minOccurs="0" maxOccurs="unbounded"/>
```

Right pane (VOEvent-v2.1.xsd):

```
65      </xs:annotation>
66      <xs:all>
67        <!-- Can have zero or one of each of these. Schema is loose because
68          should have AuthorIVORN *or* Author -->
69        <xs:element name="AuthorIVORN" type="xs:anyURI" minOccurs="0"/>
70        <xs:element name="Date" type="xs:dateTime" minOccurs="0"/>
71        <xs:element name="Description" type="xs:string" minOccurs="0"/>
72        <xs:element name="Reference" type="Reference" minOccurs="0"/>
73        <xs:element name="Author" minOccurs="0">
74          <xs:annotation>
75            <xs:documentation> Author information follows the IVOA curation informa
76              organization responsible for the packet can have a title, short name
77              logo. A contact person has a name, email, and phone number. Other con
78              be noted. </xs:documentation>
79          </xs:annotation>
80          <xs:complexType>
81            <xs:choice maxOccurs="unbounded">
82              <xs:element name="title" type="xs:string"/>
83              <xs:element name="shortName" type="xs:string"/>
84              <xs:element name="logoURL" type="xs:anyURI"/>
85              <xs:element name="contactName" type="xs:string"/>
86              <xs:element name="contactEmail" type="xs:string"/>
87              <xs:element name="contactPhone" type="xs:string"/>
88              <xs:element name="contributor" type="Name"/>
89            </xs:choice>
90          </xs:complexType>
91        </xs:element>
92      </xs:all>
93    </xs:complexType>
94
95
96    <xs:complexType name="What">
97      <xs:annotation>
98        <xs:documentation> What: Event Characterization. This is the part of the da
99          chosen by the Authoer of the event rather than the IVOA. There can be Par
100         Groups, and Tables, and simpleTimeSeries. There can also be Description a
101         with most VOEvent elements. </xs:documentation>
102     </xs:annotation>
103     <xs:choice maxOccurs="unbounded">
104       <!-- can have any number of any of these in any order  -->
105       <xs:element name="Param" type="Param" minOccurs="0" maxOccurs="unbounded"/>
106       <xs:element name="Group" type="Group" minOccurs="0" maxOccurs="unbounded"/>
107       <xs:element name="Table" type="Table" minOccurs="0" maxOccurs="unbounded"/>
```

Texte   Auteur

/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd   XML Rapide – Différences : 29 (Comparaison bilatérale)

Removed idValues restriction, and included AstroCoordSystem definitions

Added annotations

Added TimeInterval in addition to TimeInstant

Diff Files

file:/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd

```
252  <xs:choice maxOccurs="unbounded">
253    <xs:element name="TimeInstant" type="TimeInstant"/>
254    <xs:element name="Error" type="xs:float" minOccurs="0"/>
255  </xs:choice>
256  <xs:attribute name="unit" type="xs:string"/>
257  </xs:complexType>
258
259  <xs:complexType name="TimeInstant">
260    <xs:annotation>
261      <xs:documentation> Part of WhereWhen</xs:documentation>
262    </xs:annotation>
263    <xs:choice maxOccurs="unbounded">
264      <xs:element name="ISOTime" type="xs:string" minOccurs="0" maxOccurs="1"/>
265      <xs:element name="TimeOffset" type="xs:float" minOccurs="0" maxOccurs="1"/>
266      <xs:element name="TimeScale" type="xs:string" minOccurs="0" maxOccurs="1"/>
267    </xs:choice>
268  </xs:complexType>
269
270  <xs:complexType name="Position2D">
271    <xs:annotation>
272      <xs:documentation> Part of WhereWhen</xs:documentation>
273    </xs:annotation>
274    <xs:all>
275      <xs:element name="Name1" type="xs:string" minOccurs="0"/>
276      <xs:element name="Name2" type="xs:string" minOccurs="0"/>
277      <xs:element name="Value2" type="Value2"/>
278      <xs:element name="Error2Radius" type="xs:float"/>
279    </xs:all>
280    <xs:attribute name="unit" type="xs:string"/>
281  </xs:complexType>
282
283  <xs:complexType name="Position3D">
284    <xs:annotation>
285      <xs:documentation> Part of WhereWhen</xs:documentation>
286    </xs:annotation>
287    <xs:all>
288      <xs:element name="Name1" type="xs:string" minOccurs="0"/>
289      <xs:element name="Name2" type="xs:string" minOccurs="0"/>
290      <xs:element name="Name3" type="xs:string" minOccurs="0"/>
291      <xs:element name="Value3" type="Value3"/>
292    </xs:all>
293    <xs:attribute name="unit" type="xs:string"/>
294  </xs:complexType>
```

Users/baptiste/Projets/EUROPLANET/H2020/git/VOEvent/schema/VOEvent-v2.1.xsd

```
273  <xs:choice maxOccurs="unbounded">
274    <xs:element name="TimeInstant" type="TimeInstant"/>
275    <xs:element name="TimeInterval" type="TimeInterval" minOccurs="0"/>
276    <xs:element name="Error" type="xs:float" minOccurs="0"/>
277  </xs:choice>
278  <xs:attribute name="unit" type="xs:string"/>
279  </xs:complexType>
280
281  <xs:complexType name="TimeInstant">
282    <xs:annotation>
283      <xs:documentation> Part of WhereWhen</xs:documentation>
284    </xs:annotation>
285    <xs:choice maxOccurs="unbounded">
286      <xs:element name="ISOTime" type="xs:string" minOccurs="0" maxOccurs="1"/>
287      <xs:element name="TimeOffset" type="xs:float" minOccurs="0" maxOccurs="1"/>
288      <xs:element name="TimeScale" type="xs:string" minOccurs="0" maxOccurs="1"/>
289      <xs:element name="TimeOrigin" type="xs:string" minOccurs="0" maxOccurs="1"/>
290    </xs:choice>
291  </xs:complexType>
292
293  <xs:complexType name="TimeInterval">
294    <xs:annotation>
295      <xs:documentation> Part of WhereWhen</xs:documentation>
296    </xs:annotation>
297    <xs:choice maxOccurs="unbounded">
298      <xs:element name="ISOTimeStart" type="xs:string" minOccurs="0" maxOccurs="1"
299      <xs:element name="ISOTimeStop" type="xs:string" minOccurs="0" maxOccurs="1",
300    </xs:choice>
301  </xs:complexType>
302
303  <xs:complexType name="Position2D">
304    <xs:annotation>
305      <xs:documentation> Part of WhereWhen</xs:documentation>
306    </xs:annotation>
307    <xs:all>
308      <xs:element name="Name1" type="xs:string" minOccurs="0"/>
309      <xs:element name="Name2" type="xs:string" minOccurs="0"/>
310      <xs:element name="Value2" type="Value2"/>
311      <xs:element name="Error2Radius" type="xs:float" minOccurs="0"/>
312      <xs:element name="Error2" type="error2" minOccurs="0"/>
313    </xs:all>
314    <xs:attribute name="unit" type="xs:string"/>
315  </xs:complexType>
```

Texte Auteur

/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd   XML Rapide – Différences : 29 (Comparaison bilatérale)

Added Error2 in addition to Error2Radius
Added coord_value (with attributes unit, ucd)

Diff Files

Autom...

file:/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd

/Users/baptiste/Projets/EUROPLANET/H2020/git/VOEvent/schema/VOEvent-v2.1.xsd

Ignorer des nœuds par XPath

Left pane:

```
282
283    <xs:complexType name="Position3D">
284      <xs:annotation>
285        <xs:documentation> Part of WhereWhen</xs:documentation>
286      </xs:annotation>
287      <xs:all>
288        <xs:element name="Name1" type="xs:string" minOccurs="0"/>
289        <xs:element name="Name2" type="xs:string" minOccurs="0"/>
290        <xs:element name="Name3" type="xs:string" minOccurs="0"/>
291        <xs:element name="Value3" type="Value3"/>
292      </xs:all>
293      <xs:attribute name="unit" type="xs:string"/>
294    </xs:complexType>
295
296    <xs:complexType name="Value2">
297      <xs:annotation>
298        <xs:documentation> Part of WhereWhen</xs:documentation>
299      </xs:annotation>
300      <xs:all>
301        <xs:element name="C1" type="xs:float"/>
302        <xs:element name="C2" type="xs:float"/>
303      </xs:all>
304    </xs:complexType>
305
306    <xs:complexType name="Value3">
307      <xs:annotation>
308        <xs:documentation> Part of WhereWhen</xs:documentation>
309      </xs:annotation>
310      <xs:all>
311        <xs:element name="C1" type="xs:float"/>
312        <xs:element name="C2" type="xs:float"/>
313        <xs:element name="C3" type="xs:float"/>
314      </xs:all>
315    </xs:complexType>
316
317    <xs:complexType name="ObservatoryLocation">
318      <xs:annotation>
319        <xs:documentation> Part of WhereWhen</xs:documentation>
320      </xs:annotation>
321      <xs:all>
322        <xs:element name="AstroCoordSystem" type="AstroCoordSystem" minOccurs="0" max
323        <xs:element name="AstroCoords" type="AstroCoords" minOccurs="0" maxOccurs="1"
324      </xs:all>
```

Right pane:

```
       <xs:annotation>                                                               321
         <xs:documentation> Part of WhereWhen</xs:documentation>                      322
       </xs:annotation>                                                               323
       <xs:all>                                                                       324
         <xs:element name="Name1" type="xs:string" minOccurs="0"/>                    325
         <xs:element name="Name2" type="xs:string" minOccurs="0"/>                    326
         <xs:element name="Name3" type="xs:string" minOccurs="0"/>                    327
         <xs:element name="Value3" type="Value3"/>                                    328
         <xs:element name="Error3" type="error3" minOccurs="0"/>                      329
       </xs:all>                                                                      330
       <xs:attribute name="unit" type="xs:string"/>                                  331
     </xs:complexType>                                                               332
     <xs:complexType name="coord_value">                                            333
       <xs:annotation>                                                               334
         <xs:documentation>element for each axis </xs:documentation>                 335
       </xs:annotation>                                                              336
       <xs:simpleContent>                                                           337
         <xs:extension base="xs:float">                                            338
           <xs:attribute name="ucd" type="xs:string"/>                              339
           <xs:attribute name="pos_unit" type="xs:string"/>                         340
         </xs:extension>                                                            341
       </xs:simpleContent>                                                          342
     </xs:complexType>                                                              343
                                                                                    344
     <xs:complexType name="Value2">                                                345
       <xs:annotation>                                                             346
         <xs:documentation> Part of WhereWhen</xs:documentation>                   347
       </xs:annotation>                                                            348
       <xs:all>                                                                    349
         <xs:element name="C1" type="coord_value"/>                               350
         <xs:element name="C2" type="coord_value"/>                               351
       </xs:all>                                                                   352
     </xs:complexType>                                                             353
                                                                                    354
                                                                                    355
     <xs:complexType name="error2">                                               356
       <xs:annotation>                                                            357
         <xs:documentation> Part of WhereWhen</xs:documentation>                  358
       </xs:annotation>                                                           359
       <xs:all>                                                                   360
         <xs:element name="C1" type="coord_value" minOccurs="0"/>                 361
         <xs:element name="C2" type="coord_value" minOccurs="0"/>                 362
       </xs:all>                                                                   363
```

Texte   Auteur

/Users/.../Projets/EUROPLANET/H2020/git/VOEvent/schema/VOEvent-v2.1.xsd   ◼ XML Rapide – Différences : 29 (Comparaison bilatérale)

All C1, C2, C3 are coord_value type

Diff Files

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file:/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd

Users/baptiste/Projets/EUROPLANET/H2020/git/VOEvent/schema/VOEvent-v2.1.xsd

Left panel:
```
303        </xs:all>
304      </xs:complexType>
305
306      <xs:complexType name="Value3">
307        <xs:annotation>
308          <xs:documentation> Part of WhereWhen</xs:documentation>
309        </xs:annotation>
310        <xs:all>
311          <xs:element name="C1" type="xs:float"/>
312          <xs:element name="C2" type="xs:float"/>
313          <xs:element name="C3" type="xs:float"/>
314        </xs:all>
315      </xs:complexType>
316
317      <xs:complexType name="ObservatoryLocation">
318        <xs:annotation>
319          <xs:documentation> Part of WhereWhen</xs:documentation>
320        </xs:annotation>
321        <xs:all>
322          <xs:element name="AstroCoordSystem" type="AstroCoordSystem" minOccurs="0" maxO
323          <xs:element name="AstroCoords" type="AstroCoords" minOccurs="0" maxOccurs="1".
324        </xs:all>
325        <xs:attribute name="id" type="xs:string"/>
326      </xs:complexType>
327
328      <xs:complexType name="How">
329        <xs:annotation>
330          <xs:documentation> How: Instrument Configuration. Built with some Description
331            elements. </xs:documentation>
332        </xs:annotation>
333        <xs:choice maxOccurs="unbounded">
334          <xs:element name="Description" type="xs:string"/>
335          <xs:element name="Reference" type="Reference"/>
336        </xs:choice>
337      </xs:complexType>
338
339      <xs:complexType name="Why">
340        <xs:annotation>
341          <xs:documentation> Why: Initial Scientific Assessment. Can make simple Concep
342            for the inference or use multiple Inference containers for more semantic so
343          </xs:documentation>
344        </xs:annotation>
345        <xs:choice maxOccurs="unbounded">
```

Right panel:
```
352      </xs:complexType>
353
354      <xs:complexType name="error2">
355        <xs:annotation>
356          <xs:documentation> Part of WhereWhen</xs:documentation>
357        </xs:annotation>
358        <xs:all>
359          <xs:element name="C1" type="coord_value" minOccurs="0"/>
360          <xs:element name="C2" type="coord_value" minOccurs="0"/>
361        </xs:all>
362      </xs:complexType>
363
364
365      <xs:complexType name="Value3">
366        <xs:annotation>
367          <xs:documentation> Part of WhereWhen</xs:documentation>
368        </xs:annotation>
369        <xs:all>
370          <xs:element name="C1" type="coord_value"/>
371          <xs:element name="C2" type="coord_value"/>
372          <xs:element name="C3" type="coord_value"/>
373        </xs:all>
374      </xs:complexType>
375
376      <xs:complexType name="error3">
377        <xs:annotation>
378          <xs:documentation> Part of WhereWhen</xs:documentation>
379        </xs:annotation>
380        <xs:all>
381          <xs:element name="C1" type="coord_value" minOccurs="0"/>
382          <xs:element name="C2" type="coord_value" minOccurs="0"/>
383          <xs:element name="C3" type="coord_value" minOccurs="0"/>
384        </xs:all>
385      </xs:complexType>
386
387
388      <xs:complexType name="ObservatoryLocation">
389        <xs:annotation>
390          <xs:documentation> Part of WhereWhen</xs:documentation>
391        </xs:annotation>
392        <xs:all>
393          <xs:element name="AstroCoordSystem" type="AstroCoordSystem" minOccurs="0" ma:
394          <xs:element name="AstroCoords" type="AstroCoords" minOccurs="0" maxOccurs="1"
```

Texte   Auteur

/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd   ■ XML Rapide – Différences : 29 (Comparaison bilatérale)

Diff Files

Autom... | Ignorer des nœuds par XPath

file:/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd

Users/baptiste/Projets/EUROPLANET/H2020/git/VOEvent/schema/VOEvent-v2.1.xsd

```
382        </xs:annotation>
383        <xs:sequence>
384          <xs:element name="EventIVORN" type="EventIVORN" maxOccurs="unbounded"/>
385          <xs:element name="Description" type="xs:string" minOccurs="0"/>
386        </xs:sequence>
387      </xs:complexType>
388
389      <xs:complexType name="EventIVORN">
390        <xs:annotation>
391          <xs:documentation> Citations/EventIVORN. The value is the IVORN of the cited
392            attribute is the nature of that relationship, choosing from 'followup', 'sup
393            'retraction'.</xs:documentation>
394        </xs:annotation>
395        <xs:simpleContent>
396          <xs:extension base="xs:string">
397            <xs:attribute name="cite" type="citeValues"/>
398          </xs:extension>
399        </xs:simpleContent>
400      </xs:complexType>
401
402      <xs:simpleType name="citeValues">
403        <xs:restriction base="xs:string">
404          <xs:enumeration value="followup"/>
405          <xs:enumeration value="supersedes"/>
406          <xs:enumeration value="retraction"/>
407        </xs:restriction>
408      </xs:simpleType>
409
410      <xs:complexType name="Reference">
411        <xs:annotation>
412          <xs:documentation> Reference: External Content. The payload is the uri, and t
413            describes the nature of the data under that uri. The Reference can also be
414          </xs:documentation>
415        </xs:annotation>
416        <xs:sequence/>
417        <xs:attribute name="uri" type="xs:anyURI" use="required"/>
418        <xs:attribute name="type" type="xs:string"/>
419        <xs:attribute name="mimetype" type="xs:string"/>
420        <xs:attribute name="meaning" type="xs:anyURI"/>
421      </xs:complexType>
422
423    </xs:schema>
424
```

```
493    <xs:complexType name="TimeFrameType">
494      <xs:annotation>
495        <xs:documentation>A CoordFrame has to have at least an Id</xs:documentation>
496      </xs:annotation>
497      <xs:sequence>
498        <xs:element minOccurs="0" name="Name" type="xs:string"/>
499        <xs:element minOccurs="0" name="ReferencePosition" type="xs:string">
500          <xs:annotation>
501            <xs:documentation>Origin of the coordinate reference frame: either a "kr
502          </xs:annotation>
503        </xs:element>
504        <xs:element minOccurs="0" name="TimeScale" type="xs:string">
505          <xs:annotation>
506            <xs:documentation>The time reference frame consists of a time scale, a
507          </xs:annotation>
508        </xs:element>
509      </xs:sequence>
510      <xs:attribute name="id" type="xs:ID"/>
511    </xs:complexType>
512    <xs:complexType name="SpaceFrameType">
513      <xs:annotation>
514        <xs:documentation>A CoordFrame has to have at least an Id</xs:documentation>
515      </xs:annotation>
516      <xs:sequence>
517        <xs:element minOccurs="0" name="Name" type="xs:string"/>
518        <xs:element minOccurs="0" name="SpaceRefFrame" type="xs:string">
519          <xs:annotation>
520            <xs:documentation>Coordinate reference frame: optional equinox with eit
521          </xs:annotation>
522        </xs:element>
523        <xs:element minOccurs="0" name="CoordFlavor" type="xs:string">
524          <xs:annotation>
525            <xs:documentation>Provides the coordinate definitions: number of axes,
526          </xs:annotation>
527        </xs:element>
528        <xs:element minOccurs="0" name="ReferencePosition" type="xs:string">
529          <xs:annotation>
530            <xs:documentation>Origin of the coordinate reference frame: either a "k
531          </xs:annotation>
532        </xs:element>
533      </xs:sequence>
534      <xs:attribute name="id" type="xs:ID"/>
535
```

Texte   Auteur

/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd   ■ XML Rapide – Différences : 29 (Comparaison bilatérale)

… Name and contributorRole types

Autom...

file:/Users/baptiste/Projets/IVOA/TDIG/VOEvent/VOEvent/VOEvent-v2.0.xsd

Users/baptiste/Projets/EUROPLANET/H2020/git/VOEvent/schema/VOEvent-v2.1.xsd

Ignorer des nœuds par XPath

Left pane:

```
382      </xs:annotation>
383      <xs:sequence>
384        <xs:element name="EventIVORN" type="EventIVORN" maxOccurs="unbounded"/>
385        <xs:element name="Description" type="xs:string" minOccurs="0"/>
386      </xs:sequence>
387    </xs:complexType>
388
389    <xs:complexType name="EventIVORN">
390      <xs:annotation>
391        <xs:documentation> Citations/EventIVORN. The value is the IVORN of the cited
392          attribute is the nature of that relationship, choosing from 'followup', 'sup
393          'retraction'.</xs:documentation>
394      </xs:annotation>
395      <xs:simpleContent>
396        <xs:extension base="xs:string">
397          <xs:attribute name="cite" type="citeValues"/>
398        </xs:extension>
399      </xs:simpleContent>
400    </xs:complexType>
401
402    <xs:simpleType name="citeValues">
403      <xs:restriction base="xs:string">
404        <xs:enumeration value="followup"/>
405        <xs:enumeration value="supersedes"/>
406        <xs:enumeration value="retraction"/>
407      </xs:restriction>
408    </xs:simpleType>
409
410    <xs:complexType name="Reference">
411      <xs:annotation>
412        <xs:documentation> Reference: External Content. The payload is the uri, and t
413          describes the nature of the data under that uri. The Reference can also be
414        </xs:documentation>
415      </xs:annotation>
416      <xs:sequence/>
417      <xs:attribute name="uri" type="xs:anyURI" use="required"/>
418      <xs:attribute name="type" type="xs:string"/>
419      <xs:attribute name="mimetype" type="xs:string"/>
420      <xs:attribute name="meaning" type="xs:anyURI"/>
421    </xs:complexType>
422
423  </xs:schema>
424
```

Right pane:

```
537  <xs:complexType name="Name">
538    <xs:simpleContent>
539      <xs:extension base="xs:string">
540        <xs:attribute name="altIdentifier" type="xs:anyURI">
541          <xs:annotation>
542            <xs:documentation>Alternate contact identifier in URI form. The main
543          </xs:annotation>
544        </xs:attribute>
545        <xs:attribute name="role" type="contributorRole">
546          <xs:annotation>
547            <xs:documentation>Role of the Contributor
548  </xs:documentation>
549          </xs:annotation>
550        </xs:attribute>
551        <xs:attribute name="ivorn" type="xs:anyURI">
552          <xs:annotation>
553            <xs:documentation>Person id in the VO registry, if available</xs:docu
554          </xs:annotation>
555        </xs:attribute>
556      </xs:extension>
557    </xs:simpleContent>
558  </xs:complexType>
559  <xs:simpleType name="contributorRole">
560    <xs:restriction base="xs:string">
561      <xs:enumeration value="ContactPerson"/>
562      <xs:enumeration value="DataCollector"/>
563      <xs:enumeration value="DataCurator"/>
564      <xs:enumeration value="DataManager"/>
565      <xs:enumeration value="Distributor"/>
566      <xs:enumeration value="Editor"/>
567      <xs:enumeration value="HostingInstitution"/>
568      <xs:enumeration value="Producer"/>
569      <xs:enumeration value="ProjectLeader"/>
570      <xs:enumeration value="ProjectManager"/>
571      <xs:enumeration value="ProjectMember"/>
572      <xs:enumeration value="RegistrationAgency"/>
573      <xs:enumeration value="RegistrationAuthority"/>
574      <xs:enumeration value="RelatedPerson"/>
575      <xs:enumeration value="Researcher"/>
576      <xs:enumeration value="ResearchGroup"/>
577      <xs:enumeration value="RightsHolder"/>
578      <xs:enumeration value="Sponsor"/>
579      <xs:enumeration value="Supervisor"/>
```

Texte | Auteur