StandardsRegExt-1.1

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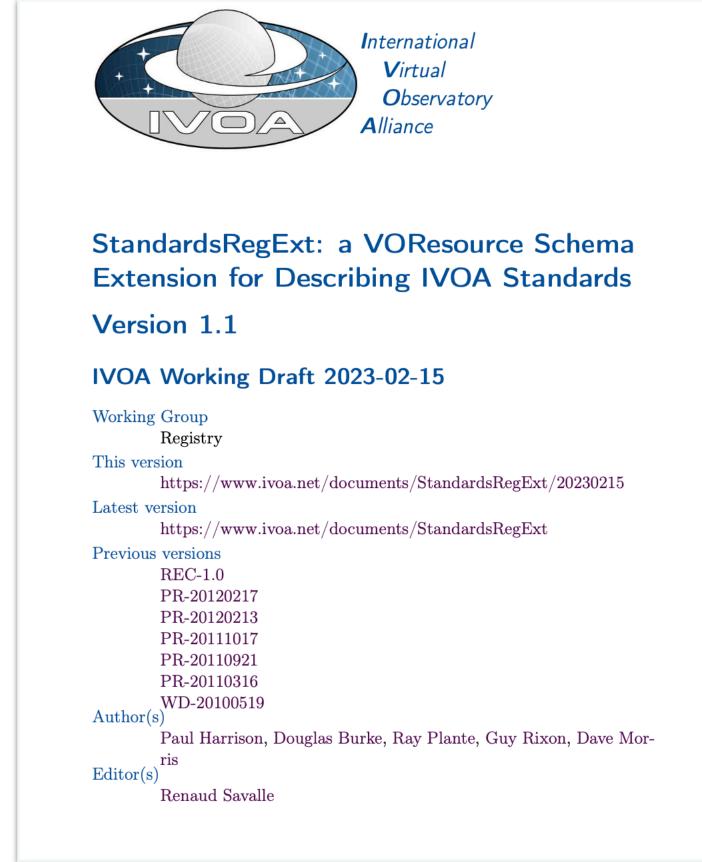IVOA Interop Meeting - Bologna - 2023-05-09 - Registry WG

StandardsRegExt ?

- An Extension of the VOResource XML schema (a "RegExt") to register Standard Documents produced by the IVOA TCG

- Version 1.0 by Harrison et al., 2012. This talk is about updates for version 1.1

- Defines 3 VOResource types:
  - **Standard** = describes any IVOA standard
  - **ServiceStandard** = same but with an interface (without a capability!)
  - **StandardKeyEnumeration** = describes collection of standard keys

- **Standard** has several elements
  - standard VOResource (vr:resource) metadata (creators…)
  - location of standard document itself reference URL
  - current EndorsedVersion and status (rec, pr, wd)
  - location of schema files associated with the standard
  - etc.

- **ServiceStandard** inherits from Standards and also describes service parameters in a machine-readable way

International
Virtual
Observatory
Alliance

StandardsRegExt: a VOResource Schema Extension for Describing IVOA Standards

Version 1.1

IVOA Working Draft 2023-02-15

Working Group
    Registry
This version
    https://www.ivoa.net/documents/StandardsRegExt/20230215
Latest version
    https://www.ivoa.net/documents/StandardsRegExt
Previous versions
    REC-1.0
    PR-20120217
    PR-20120213
    PR-20111017
    PR-20110921
    PR-20110316
    WD-20100519
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Example of a Definition of Standard
ivoa.net resource for declaring the HiPS Standard with identifier
ivo://ivoa.net/std/hips

```xml
<ri:Resource xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"
xmlns:vstd="http://www.ivoa.net/xml/StandardsRegExt/v1.0"
xmlns:ri="http://www.ivoa.net/xml/RegistryInterface/v1.0"
created="2017-06-01T09:33:00Z"
updated="2017-06-01T09:33:00Z"
status="active"
xsi:type="vstd:Standard">
  <title>HiPS -- Hierarchical Progressive Survey</title>
  <identifier>ivo://ivoa.net/std/hips</identifier>
  <curation>
    <publisher>IVOA Apps Working Group</publisher>
    <creator>
      <name>Fernique, P.</name>
    </creator>
    …
    <date role="created">2017-06-01T09:33:00</date>
    <contact>
      <name>IVOA Apps Working Group</name>
      <email>apps@ivoa.net</email>
    </contact>
  </curation>
  <content>
    <subject>Virtual observatory</subject>
    <subject>Standards</subject>
    <subject>HiPS</subject>
    <description>HiPS: a hierarchical scheme for the
description, storage and
access of sky survey data. The system is based on hierarchical
tiling of sky
regions at finer and finer spatial resolution which facilitates
a progressive
view of a survey, and supports multi-resolution zooming and
panning. HiPS uses
the HEALPix tessellation of the sky as the basis for the scheme
and is
implemented as a simple file structure with a direct indexing
scheme that
leads to practical implementations.</description>
    <referenceURL>http://ivoa.net/documents/HiPS</referenceURL>
  </content>
  <endorsedVersion status="rec" use="preferred">1.0</
endorsedVersion>
  <key>
    <name>hipslist-1.0</name>
    <description>A service returning a list of HiPS identifiers
    and metadata for HiPS.  This term is used to form a
standardID,
    for instance for use in vr:Capability.</description>
  </key>
  <key>
    <name>hips-1.0</name>
    <description>A single HiPS.  This term is used to form a
standardID,
    for instance for use in vr:Capability.</description>
  </key>
</ri:Resource>
```

Example of the usage of a Standard
Ex: irsa.ipac resource which uses
ivo://ivoa.net/std/hips

```xml
<ri:Resource xmlns="" xmlns:ri="http://www.ivoa.net/xml/
RegistryInterface/v1.0" xmlns:vr="http://www.ivoa.net/xml/VOResource/
v1.0" xmlns:vs="http://www.ivoa.net/xml/VODataService/v1.0"
xmlns:cs="http://www.ivoa.net/xml/ConeSearch/v1.0" xmlns:tr="http://
www.ivoa.net/xml/TAPRegExt/v1.0" xmlns:xlink="http://www.w3.org/
1999/xlink" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="vr:Service" status="active" updated="2018-05-12T00:00:00Z"
created="2018-05-12T00:00:00Z">
   <validationLevel validatedBy="ivo://archive.stsci.edu/nvoregistry">2</
validationLevel>
   <title>IRSA Hierarchical Progressive Survey (HiPS) Node</title>
   <shortName>IRSA HiPS</shortName>
   <identifier>ivo://irsa.ipac/HiPS</identifier>
   <curation>
      <publisher ivo-id="ivo://irsa.ipac/IRSA">NASA/IPAC Infrared
Science Archive</publisher>
      <creator>
         <name>IRSA</name>
      </creator>
      <version>1</version>
      <contact>
         <name>IRSA Support Team</name>
         <address/>
         <email>irsasupport@ipac.caltech.edu</email>
         <telephone/>
      </contact>
   </curation>
   <content>
      <subject>Infrared Astronomy</subject>
      <description>This is IRSA's Hierarchical Progressive Survey (HiPS)
node. HiPS is a hierarchical scheme for the description, stoage, and
access of sky survey data. The system is based on hierarchical tiling of
sky regions at finer and finer spatial resolution which facilitates a
progressive view of a survey, and supports multi-resolution zooming and
panning.</description>
      <referenceURL>http://www.ivoa.net/documents/HiPS</
referenceURL>
      <type>Other</type>
      <contentLevel>Research</contentLevel>
   </content>
   <capability standardID="ivo://ivoa.net/std/hips#hipslist-1.0">
      <validationLevel validatedBy="ivo://archive.stsci.edu/
nvoregistry">2</validationLevel>
      <interface xsi:type="vs:ParamHTTP" role="std">
         <accessURL use="full">https://irsa.ipac.caltech.edu/data/hips/
list</accessURL>
      </interface>
   </capability>
</ri:Resource>
```

Problems

- From Review by MD at InterOpOct2022 Registry Session: https://wiki.ivoa.net/internal/IVOA/InterOpOct2022Reg/sre-review.pdf

- Problem 1: How To Register Endorsed Notes

- Problem 2: What [Standards] Do We Register?

- Problem 3: Who Writes [StandardsRegExt] records ?

- Problem 4: Creating Keys

Problem 1: How To Register Endorsed Notes

- Solution 1: Add statuses **en** and **pen** to EndorsedVersion

- Why ?
  - Register Endorsed Notes and Proposed Endorsed Notes alongside rec, pr, wd, iwd

- Use Case ?
  - We will be able to define a standard identifiers and keys related to an Endorsed Note

Endorsed Notes

Group	Title	Most stable	In progress	Version history
GWS	XML Schema Versioning Policies	1.0		1.0 1.0
ReR	Discovering Data Collections Within Services	1.1		1.1 1.1 1.1
DAL	Catalogue of ADQL User Defined Functions	1.0		1.0 1.0 1.0
Semantics	Adopting the UAT as an IVOA vocabulary	1.0		1.0 1.0 1.0 1.0
TGC	IVOA Architecture	2.0		2.0

Problem 2: What Standards Do We Register?

- Solution 2: Standards to Register are "Only IVOA standards that actually make use of identifiers *to* or *into* StandardsRegExt records MUST be accompanied with active records published by the ivoa.net registry. "

- **to** means usage of the identifier of the std

- **into** means usage of a key of that std - cf HiPS example above

Problem 3: Who Writes StandardsRegExt records ?

- Solution 3: Editors of standards requiring an ivoa.net StandardsRegExt record SHOULD create one when they submit their first Working Draft in order to make valid standardids, even in prototyping phases.

- ivoatex (framework for publishing standards) contains a way to do that, which is described by ivoatex doc section 3.10

Problem 4a: What To Do With StandardKeyEnumeration ?

- Solution 4a: Deprecate StandardKeyEnumeration and use Controlled Vocabularies (CVs)

- Why ?
  - StandardKeyEnumeration has never been used
  - we now have a better way of creating (sets of) keys

- => Replace StandardKeyEnumeration type by CVs maintained by the Semantics WG

- These CVs will be, by design:
  - updatable using the Vocabulary Enhancement Procedure (VEP)
  - machine-readable by non-VO software…

- NB: for keys *within* standards records, we keep the current scheme which is being used

Problem 4b: Who Writes standard keys, And How ?

- Section 4 - Operational Aspects:

- *"Standards using standard keys must specify rules defining when and how standard keys are being added. In the simplest case, this would be "Keys in this standard's StandardsRegExt record are defined in this text." This will make sure that additions of keys receive the same review as the standard text itself."*

- *"However, other, more flexible regulations are conceivable, as for instance "Keys in this standard's StandardsRegExt record can be added by the chair of the managing Working Group after consultation on the WG's mailing list". However, complicated processes should be avoided here"…*

StandardsRegExt-1.1 - Next Steps...

- Repository: https://github.com/ivoa-std/StandardsRegExt

- We plan to go for WD after this meeting

- Please read and contribute !

IVOA Recommendation Process

IAU Standard

Possible IAU endorsement

Recommendation

IVOA-wide RFC, TCG review, 6 weeks
Incremental versions if needed
TCG vote, 2 weeks
IVOA Exec review and approval

Proposed
Recommendation

Agreement within Working Group

Working Draft

Notes