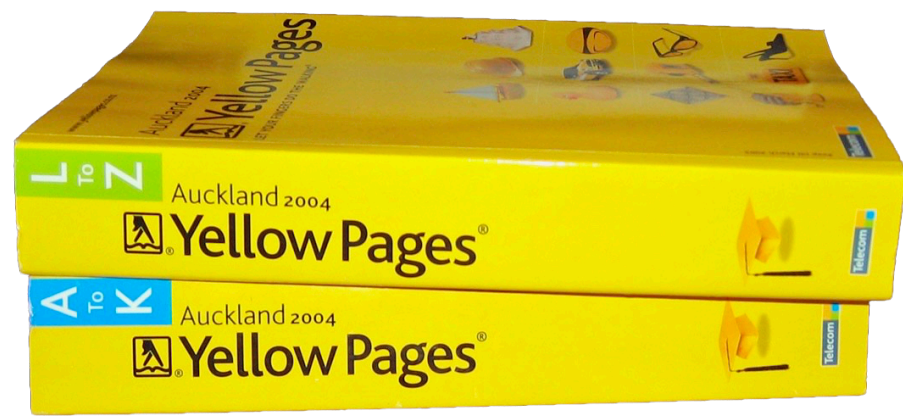




StandardsRegExt-1.1 and OpenAPI

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StandardsRegExt ?

- An Extension of the **VOResource** XML schema (a “RegExt”)
- Purpose: register Standard Documents and Protocols produced by the IVOA TCG
- Version 1.0 by Harrison et al., 2012. This talk refers to PR 1.1 dated 2024-01-25
- StandardsRegExt defines 3 *VOResource* types:
 - **Standard** = describes any IVOA standard
 - **ServiceStandard** = an IVOA standard with a protocol
 - **StandardKeyEnumeration** = describes collection of *standard keys*, which can be used to identify, for example, specific features of a standard protocol
- **Standard** has several elements
 - standard VOResource (vr:resource) metadata (eg: curation...)
 - location of standard document itself in <referenceURL>
 - current EndorsedVersion and its status (rec, pr, wd)
 - location of schema files associated with the standard...
 - etc.
- **ServiceStandard** inherits from Standards and also describes service and its parameters in a machine-readable way <interface> (no <capability> vs services *instances*)



StandardsRegExt: a VOResource Schema Extension for Describing IVOA Standards

Version 1.1

IVOA Proposed Recommendation 2024-01-25

Working Group
Registry

This version
<https://www.ivoa.net/documents/StandardsRegExt/20240125>

Latest version
<https://www.ivoa.net/documents/StandardsRegExt>

Previous versions
PR-20230921
REC-1.0
PR-20120217
PR-20120213
PR-20111017
PR-20110921
PR-20110316
WD-20100519

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Example: Resource ivo://ivoa.net/std/ConeSearch

- type: ServiceStandard
- Published on ivoa.net Publishing Registry
- Defines the Simple Cone Search standard

Part 1/2: lines 1-56 ➞

Skeleton:

<title/>

<shortName/>

<identifier>ivo://ivoa.net/std/ConeSearch
</identifier>

<curation/>

 <publisher/>

<content/>

 <subject/>

 <description/>

 <referenceURL>

 <relationship/>

<endorsedVersion/>

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <ri:Resource xmlns:ri="http://www.ivoa.net/xml/RegistryInterface/v1.0"
3   xmlns:vr="http://www.ivoa.net/xml/VOResource/v1.0"
4   xmlns:vstd="http://www.ivoa.net/xml/StandardsRegExt/v1.0"
5   xmlns:vs="http://www.ivoa.net/xml/VODataService/v1.1"
6   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="vstd:ServiceStandard"
7   status="active" created="2013-03-25T19:21:51.06" updated="2023-05-23T14:03:00"
8   xsi:schemaLocation="http://www.ivoa.net/xml/VOResource/v1.0 http://www.ivoa.net/xml/VOResource/v1.0
9   <title> Simple Cone Search </title>
10  <shortName> ConsSearch </shortName>
11  <identifier> ivo://ivoa.net/std/ConeSearch </identifier>
12  <curation>
13    <publisher ivo-id="ivo://ivoa.net/IVOA"> International Virtual Observatory Alliance </publisher>
14    <creator>
15      <name> Roy Williams </name>
16    </creator>
17    <creator>
18      <name> Robert Hanisch </name>
19    </creator>
20    <creator>
21      <name> Alex Szalay </name>
22    </creator>
23    <creator>
24      <name> Raymond Plante </name>
25    </creator>
26    <date> 2008-02-22 </date>
27    <version> 1.0 </version>
28    <contact>
29      <name> Data Access Layer Working Group </name>
30      <email> dal@ivoa.net </email>
31    </contact>
32  </curation>
33  <content>
34    <subject> software standard </subject>
35    <subject> virtual observatory </subject>
36    <subject> data access layer </subject>
37    <subject> DAL </subject>
38    <description> This specification defines a simple query protocol for retrieving records
39      from a catalog of astronomical sources. The query describes sky position and an
40      angular distance, defining a cone on the sky. The response returns a list of
41      astronomical sources from the catalog whose positions lie within the cone, formatted
42      as a VOTable. This version of the specification is essentially a transcription of the
43      original Cone Search specification in order to move it into the IVOA standardization
44      process. Note that the metadata used to describe a Cone Search service in the registry
45      is defined in the SimpleDALRegExt standard (ivo://www.ivoa.net/std/SimpleDALRegExt;
46      http://www.ivoa.net/Documents/SimpleDALRegExt/). </description>
47    <referenceURL> http://www.ivoa.net/Documents/latest/ConeSearch.html </referenceURL>
48    <type> Other </type>
49    <contentLevel> Research </contentLevel>
50    <relationship>
51      <relationshipType>related-to</relationshipType>
52      <relatedResource ivo-id="ivo://www.ivoa.net/std/SimpleDALRegExt"> SimpleDALRegExt:
53        Describing Simple Data Access Services </relatedResource>
54    </relationship>
55  </content>
56  <endorsedVersion status="rec"> 1.03 </endorsedVersion>
```


Example: Resource [ivo://ivoa.net/std/ConeSearch](http://ivoa.net/std/ConeSearch)

- type: ServiceStandard
- Published on ivoa.net Publishing Registry
- Defines the Simple Cone Search standard

Part 2/2: lines 57-91 ➞

Skeleton:

```
<interface xsi:type="vs:ParamHTTP">
  <accessURL> [NB: bogus here]
  <queryType/>
  <resultType/>
  <param/>
  ...
  <param/>
</interface>
```

```
57 <interface xsi:type="vs:ParamHTTP" role="std" version="1.0">
58   <accessURL use="base"> http://sample.org/cgi-bin/scs </accessURL>
59   <queryType>GET</queryType>
60   <resultType>text/xml+votable</resultType>
61   <!--
62     - These are the standard input parameters defined in the
63     - SCS spec
64   -->
65   <param use="required">
66     <name>RA</name>
67     <description> the right-ascension in the ICRS coordinate system for the positon of the
68       center of the cone to search, given in decimal degrees. </description>
69     <unit>degrees</unit>
70     <dataType arraysize="2">real</dataType>
71   </param>
72   <param use="required">
73     <name>DEC</name>
74     <description> the declination in the ICRS coordinate system for the positon of the
75       center of the cone to search, given in decimal degrees. </description>
76     <unit>degrees</unit>
77     <dataType arraysize="2">real</dataType>
78   </param>
79   <param use="required">
80     <name>SR</name>
81     <description> the radius of the cone to search, given in decimal degrees. </description>
82     <unit>degrees</unit>
83     <dataType arraysize="2">real</dataType>
84   </param>
85   <param use="ignored">
86     <name>VERB</name>
87     <description> the level of verbosity in the output. </description>
88     <dataType>string</dataType>
89   </param>
90 </interface>
91 </ri:Resource>
92
```

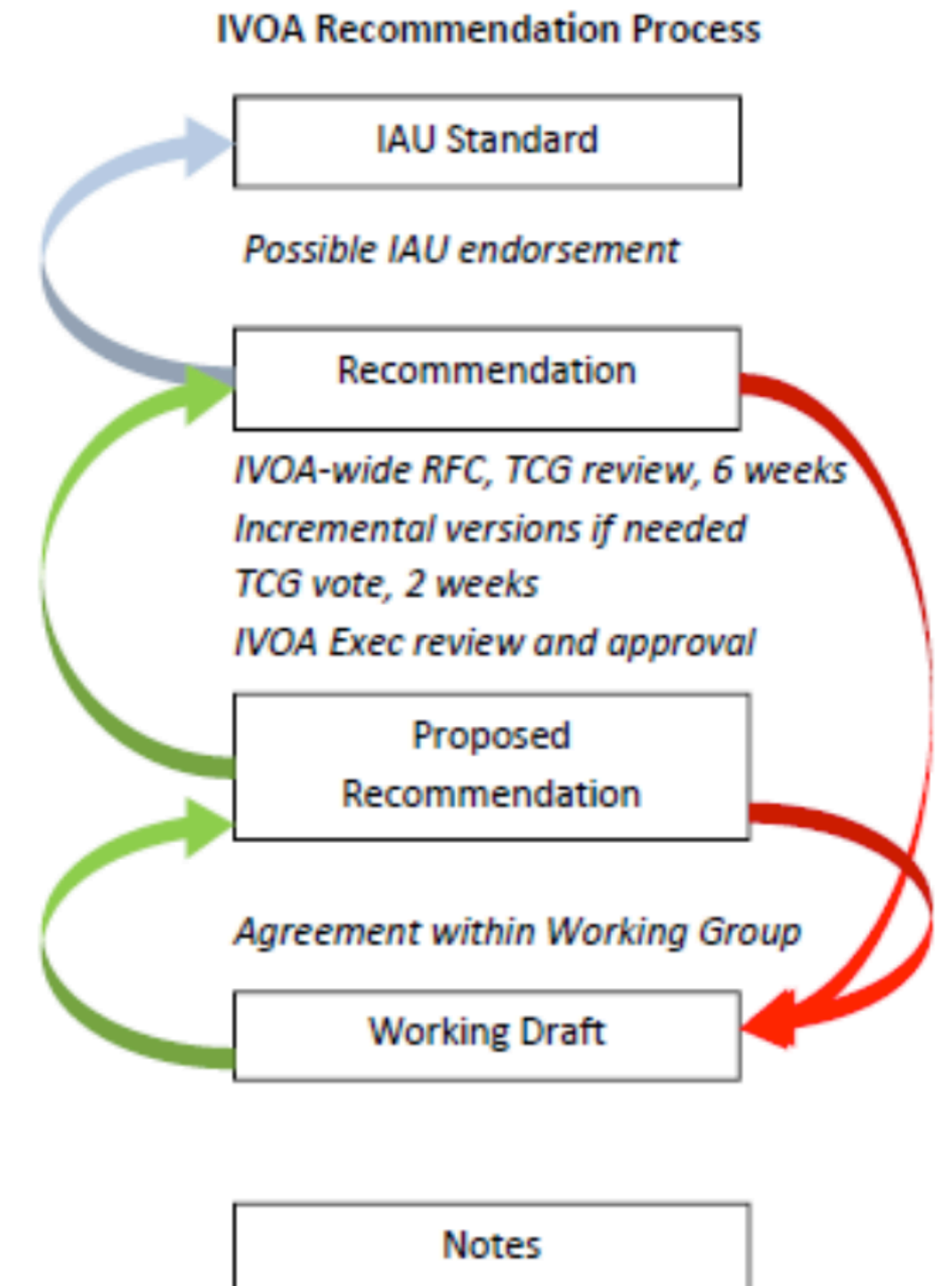
Example Usage: Resource [ivo://org.gavo.dc/gaia/q3/cone](http://org.gavo.dc/gaia/q3/cone)

- type: CatalogService
- Published on GAVO Publishing Registry
- Uses the Simple Cone Search standard

```
<capability standardID="ivo://ivoa.net/std/ConeSearch" xsi:type="cs:ConeSearch">
```

StandardsRegExt-1.1 - Status

- Repository: <https://github.com/ivoa-std/StandardsRegExt>
- We plan to vote on PR 1.1 after this meeting
- Last chance to submit comments for all
- TCG chairs: Please submit your votes !



Proposal for StandardsRegExt-1.2

➡ Embed OpenAPI specs

Example

```
<interface ...>  
  <apiSpec  
    type="ivo://standardsregext/openapi-1.1">  
      https://github.com/ivoa/PTTT/blob/main/cone-search/openapi.json  
    </apiSpec>  
</interface>
```

Topics for Discussion...

- Use-case ?
- OpenAPI Repo with structure allowing includes ?