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ESCAPE

European Science Cluster of Astronomy &
Particle physics ESFRI research Infrastructures

ConeSearch status & discussion



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The need for a ConeSearch revision

Simple Cone Search
Version 1.03

IVOA Recommendation **22 February 2008**

- 2 milestones to work on
 - The protocol is not up to date with **current landscape**
 - A new requirement comes in from the **Time Domain**
- 3rd one (1/2 milestone)
 - Registry & Capabilities
- 1 decision to take
 - **1.1 or 2.0**



- Some updates already done (~2 years ago)
- Some didn't reach agreement
- ...and some smaller editorial matters to fix

(wait a few slides or look at the etherpad for finer details)



- **1 new optional parameter: TIME**
 - the time **interval** to be searched for data
 - open or closed interval with numeric values
 - interpreted as MJDs
 - values interpreted as **UTC time scale and UNKNOWN reference position**
 - as specified in DALI in the section on literal values
 - MJD values always in days
 - constraint is satisfied if the interval intersects the time coverage of the observation
- (VOTable) response addition
 - exactly one FIELD, representing the time of the observation, **MUST**
 - have **ucd="time.epoch;meta.main"**
 - have **datatype** set to **"float"** or **"double"** (ISO? [char])



- (currently) inclusion of SimpleDALRegExt
 - Need to follow “**caproles**” discussion
- Time Domain addition
 - Discovery of services **w/ or w/o time filtering** feature

(wait a couple of slides or look at the etherpad for finer details)



Landscape, time, registry and interface description ...
... makes it more complicated to keep a minor revision

but ...

Switching MAJOR revisions has its own hurdles ...

- Take up
- Clean transition

https://indico.in2p3.fr/event/20005/sessions/13085/attachments/57308/76506/MajorRevisionProcess_hack-a-thon.txt



“You can find me...



...in the detail”



ConeSearch-1.03-Erratum-1: <INFO name="Error" > uniqueness clarification

- Longer the title than the issue
 - https://wiki.ivoa.net/twiki/bin/view/IVOA/SCS-1_03-Err-1

in running document	1.x	2.0	Time Domain related	new issue?
NO	Add		NO	1.x: yes 2.0: no



- DALI compliant instead of ConeSearch custom solution
 - Kept heritage as deprecated solution

in running document	1.x	2.0	Time Domain related	new issue?
YES	keep deprecate	DALI only	NO	NO



- Copy/pasted content from SimpleDALRegExt to replace custom solution
 - With “caproles” discussion may need to be revisited

in running document	1.x	2.0	Time Domain related	new issue?
YES	?	?	YES	YES

NOTE: filtering TIME capable service!



- Simply relaxed to allow float alongside double
 - If 2.0 there may be discussion on parameter choices
 - e.g. POS vs. RA,Dec,SR

in running document	1.x	2.0	Time Domain related	new issue?
YES	keep	?	NO	1.x: no 2.0: yes?



- Added following DALI
 - SR=0 for metadata, kept
 - VOTable mandatory response, kept

in running document	1.x	2.0	Time Domain related	new issue?
YES	keep?	DALI only	NO	NO

NOTE: suggest usage of RESPONSEFORMAT for binary output.



- Added support for capabilities & availability
 - Issue with heritage <GET-EXTRA-ARGS>
 - “caproles” discussion

in running document	1.x	2.0	Time Domain related	new issue?
YES	?		NO	YES



VOTable response version

- Relaxed version number
 - Never closed discussion on back-compatibility
 - Needs examples to be fixed

in running document	1.x	2.0	Time Domain related	new issue?
YES	VOTable 1.0+	VOTable 1.4+	YES TIMESYS	YES



- Added MAXREC=0
 - Kept heritage SR=0

in running document	1.x	2.0	Time Domain related	new issue?
YES	keep heritage	DALI only	NO	NO



- Allowing POST alongside GET (DALI)
 - But <GET-EXTRA-ARGS> ?

in running document	1.x	2.0	Time Domain related	new issue?
YES	?	?	NO	YES



RESOURCE type & number

- There exist 1.03 services not using the RESOURCE@type
- To allow DataLink the number of RESOURCE/TABLE has to be relaxed

in running document	1.x	2.0	Time Domain related	new issue?
NO	?		NO	YES



ReST vs query-param

- Would solve many issue
 - Minor revision would get messy

in running document	1.x	2.0	Time Domain related	new issue?
NO	?		NO	YES



- Move to UCD1+ strictly?

in running document	1.x	2.0	Time Domain related	new issue?
NO	?		YES	YES

NOTE: no back-compatibility chance with minor revision.



- Correct choice of sky positions at different server-side epochs

in running document	1.x	2.0	Time Domain related	new issue?
NO	?		YES	YES



- Get whole catalogue
 - Possibly allow TIME (or other) filtering

in running document	1.x	2.0	Time Domain related	new issue?
NO	?	?	YES	?

NOTE: SR=180, leave it to DALI, ...



- As a filtering parameter
- Possibly leave it for later, i.e. 2.0 or even 2.1+

in running document	1.x	2.0	Time Domain related	new issue?
NO	NO	?	YES	?



- Based on all the updates/feature described previously...
- Considering the transition hurdles...
- ... and the take-up time span ...



- GitHub (ivoa-std) repo
 - <https://github.com/ivoa-std/ConeSearch>
- Simple Cone Search on DAL TWiki
 - <https://wiki.ivoa.net/twiki/bin/view/IVOA/ConeSearch>

- Etherpad for this session's discussion
 - https://yopad.eu/p/IVOA_Virtual2020_ConeSearch (*)

* Later persisted within <https://wiki.ivoa.net/twiki/bin/view/IVOA/InterOpMay2020DAL> contents

