STScI | SPACE TELESCOPE SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY
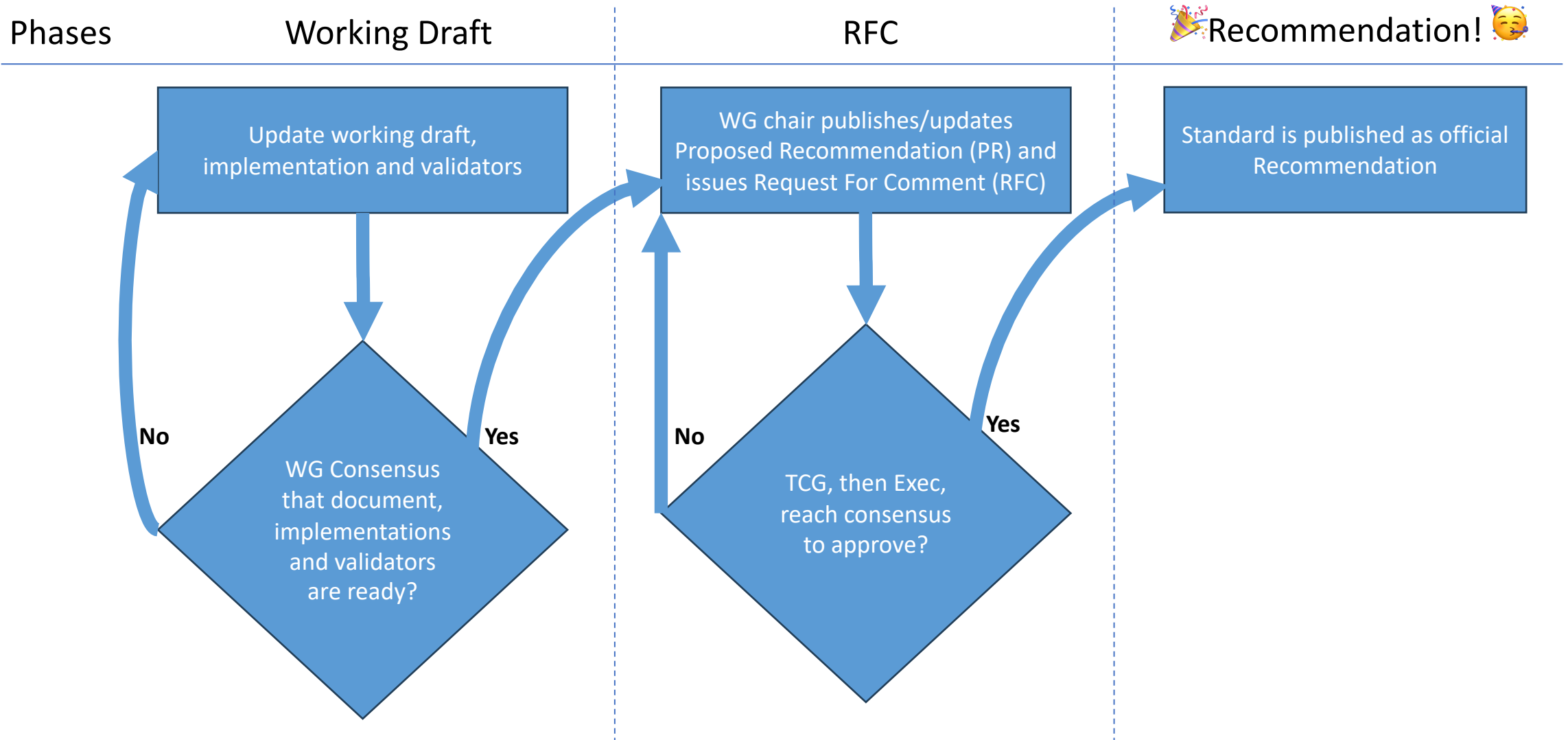
VOTable 1.5: Status and Process

Tom Donaldson

IVOA Interop – Northern Fall 2023

Document Process Overview(*)

Phases	Working Draft	RFC	🎉 Recommendation! 🥳

Update working draft, implementation and validators

WG chair publishes/updates Proposed Recommendation (PR) and issues Request For Comment (RFC)

Standard is published as official Recommendation

No / **Yes**

WG Consensus that document, implementations and validators are ready?

No / **Yes**

TCG, then Exec, reach consensus to approve?

* See IVOA Document Standards Version 2.0 for details

What's been changed so far

From the current working draft (23 October 2023):

9.4 Differences Between Versions 1.4 and 1.5

The differences between version 1.5 of VOTable and the preceding version 1.4 are:

- COOSYS now has a `refposition` attribute analogous to TIMESYS.

- The frame identifiers (`system` attribute) in COOSYS are now taken from the refframe IVOA vocabulary.

- Clarifications and rewording on:

    - the meaning of `MIN` and `MAX value` attributes for array types.
    - removing the recommendation to use xmlns to do utype prefix binding.
    - timescales for calendar epochs.
    - positioning advice for `ID` and corresponding references.
    - noting that `RESOURCE` elements can contain `MIVOT` blocks.

New COOSYS approach added then removed

[Give position components roles in COOSYS](#)) (pull request #40)

- Proposed an approach for supporting the long-desired use case of epoch propagation.
- Discussion happened on Github, probably to a fairly limited audience
- The proposal was merged and made part of the [13 September working draft](#) so that it could be concretely discussed on the Apps mail list

Discussion made clear it was not a simple yes or no question

- Multiple possible tweaks/improvements suggested within that proposal
- Multiple alternatives available
- If MIVOT approaches are close at hand, would this change be worthwhile?
  - Were MIVOT approaches close at hand?

Decided to defer consideration of changes for epoch propagation to v1.6

- Decision reached during Apps WG Zoom meeting
- Hopefully allows demonstration that minor revisions can be produced relatively quickly

All Changes Were Made via Github Pull Requests

Pull requests (PRs) with milestone of v1.5:

- https://github.com/ivoa-std/VOTable/pulls?q=+is%3Apr+milestone%3Av1.5+

Can view all changes for each PR

E.g., new tests for [validating example VOTables in PR #40](#)

One PR currently open

As mentioned on Apps mail list, PR #50 makes some corrections and format changes based on recent comments:

- Update appendix B title to V1.5
- Remove space from xtype="circle" in section 4.7
- Add reference to architecture diagram in section 1.4
- Remove \parindent=0pt to make paragraph breaks more apparent
- Remove unwanted indentation after example in sect. 4.7, p18
- eq_FK4/5 ==> FK4/5
- update examples to v1.5
- Where possible, use \ivoaDocversion in references to "current version"

Many changes driven by existing Github issues

List of issues addressed in v1.5

- https://github.com/ivoa-std/VOTable/issues?q=is%3Aissue+is%3Aclosed+milestone%3Av1.5

⊙ 4 Open   ✓ 7 Closed   Author ▾   Label ▾   Projects ▾

⊘ **Review section 9.4 (Differences Between Versions 1.4 and 1.5)** `Priority: High`
#46 by tomdonaldson was closed 3 weeks ago   ⇌ v1.5

⊘ **Update sections 7.1 and 7.2 to match schema changes for COOSYS** `Priority: High`
#41 by tomdonaldson was closed 3 weeks ago   ⇌ v1.5

⊘ **Add example to help explain MIN/MAX clarification**
#32 by tomdonaldson was closed on Sep 13   ⇌ v1.5

⊘ **Consider removing recommendation to avoid forward references**
#27 by smonkewitz was closed on Sep 13   ⇌ v1.5

⊘ **Add definitions for legal COOSYS "system" values.**
#22 by tomdonaldson was closed on Sep 13   ⇌ v1.5

⊘ **Remove confusing paragraph in section 4.6**
#18 by tomdonaldson was closed on Sep 13   ⇌ v1.5

⊘ **COOSYS should have "refposition" attribute**
#16 by tomdonaldson was closed on Sep 13   ⇌ v1.5

Some issues marked for v1.5 were not addressed

Open issues marked for v1.5

- https://github.com/ivoa-std/VOTable/issues?q=is%3Aissue+milestone%3Av1.5+is%3Aopen

- Left unaddressed, they will be marked for v1.6

Recognition of Effort

This process requires significant effort!

- Proposing what should be modified (creating issues)
- Proposing changes (creating pull requests with actual edits to the document)
- Reviewing and commenting on proposed changes
- Building interoperable implementations
- Building validators

Big thanks to all who have contributed and will contribute!!!

Next steps

Merge [active PR](#) based on recent editorial comments
- Please review and comment or approve

Publish new (final?) working draft immediately after merge

Publish Proposed Recommendation (PR) for Request For Comment (RFC) period
- Consensus of working group
- Do we have needed implementations?
  - Consumers
    - Many parsers (Topcat/Stilts, Astropy) can, or soon will, accept this version
    - But do any use the new features (i.e., COOSYS refposition)
      - Should such use be required?
  - Producers?
  - Validators
    - Topcat imminent
    - Astropy soon

Discussion: Benefits and drawbacks of using Github PRs

Benefits

- Proposed changes are concrete; includes pdf preview
- Every change is traceable; helps when undoing specific changes
- Comments are in context, can be attached to a specific line of the document
- Notifications – can subscribe to a document, issue, pull request

Drawbacks

- We are used to using only one channel of communication
  - Conversations in Github may be missed by those monitoring e-mail and vice versa
- Potentially disjoint conversations; not easy to find all active discussions
- Learning curve with Github and/or ivoatex. Note however that:
  - All ideas are still welcome via e-mail and Github
  - Several of us are willing to help with the mechanics, or create PRs ourselves based on those ideas.
- Notifications - not as simple as subscribing to a WG list

Discussion: Questions/Ideas

Moving to RFC:

- How do we know when we've reached consensus on a working draft so that it can go to Proposed Recommendation? Are we there except for proofreading this week's new WD?
- Do we need implementations that provide and consume v1.5 VOTables? COOSYS refposition?
  - Perhaps crucial for large or controversial changes, but not for minor corrections/improvements?

Improving integration of both Github and e-mail discussions:

- Notify mail list when PRs created? When major comments made?

Trying to show that we can release minor versions of the standard relatively quickly:

- Is this a realistic goal? Are there ways we can be more efficient?
- Worth having working Zoom meetings to move things forward?
  - Not as good as face to face but can help keep us engaged and focused
  - Did help with COOSYS issue

Other ideas?