



Lifecycle of a document change

IVOA Virtual Interop – May 2020

Tom Donaldson
(and many others)



Goal

Increase comfort level with the document change process.

- GitHub is substantially different from SVN
 - Enables powerful features for reviewing/discussing changes
 - More supportive of multiple contributors
 - But more complicated.
 - Jargon is not intuitive
 - Easy to omit a step and get yourself in trouble.

Clean, succinct documentation could help

Straightforward recipes for common tasks

Help manage/explain the unintuitive jargon

Ideally include both GitHub Desktop and command line instructions



Goal (2)

Increase comfort level with the document change process.

- Clean, succinct documentation could help
 - Straightforward recipes for common tasks
 - Help manage/explain the unintuitive jargon
 - Ideally include both GitHub Desktop and command line instructions
- Where should this documentation live?
 - TBD
- How should it be maintained?
 - In GitHub!
- Process should be very similar to that used by Astropy/PyVO
 - Familiar process makes it easier to move from code to docs and back



Proposed Experiment

Let's all try to change the VOTable document

- Follow process presented in Groningen
 - With new notes about command line alternatives
- Note pain points and questions
 - Throw lots of tomatoes

After experiment

- Decide where process documentation should live
- Draft Pull Request for process docs so that it can be reviewed



GitHub for IVOA Standards

James Dempsey, Patrick Dowler, Marco Molinaro, Dave Morris, Ole Streicher
(then defaced by Tom Donaldson)





IVOA GitHub Approach

- Hosted at <https://github.com/ivoa-std>
- One repository for each standard
- Shows the current development of the standard
- Use issues to track work
- License: CC-BY-SA

The screenshot shows the GitHub interface for the 'ivoa-std' organization. At the top, there are navigation links for 'Repositories 6', 'Packages', 'People 10', 'Teams 3', and 'Projects'. The main header displays the organization name 'International Virtual Observatory Alliance standards' and the description 'IVOA standards documents' with a link to 'http://ivoa.net/documents/'. Below this is a search bar and filters for 'Type: All' and 'Language: All'. A 'New' button is visible in the top right. The repository list includes:

- datalink**: DataLink standard (DAL). Language: TeX. 1 fork, 0 stars, 3 issues, 2 pull requests. Updated on 22 Jul.
- volute-migration**: Scripts and documentation to move document development from Volute SVN to Github. Language: Shell. 0 forks, 0 stars, 0 issues, 0 pull requests. Updated on 17 Jun.
- ivoatex**: IVOA LaTeX toolkit for document authors. Language: C. License: GPL-3.0. 1 fork, 1 star, 0 issues, 0 pull requests. Updated on 12 Jun.

On the right side, there are sections for 'Top languages' (TeX, Shell, C) and 'People' (10 >).



Git Terminology

| Term | Description |
|------------|---|
| Repository | Collection of files managed by git (aka repo) |
| Fork | Make a copy of a GitHub repo in your own GitHub account |
| Branch | Create a separate track of the code to work on |
| Clone | Create a local copy of the repo |

| Term | Description |
|--------------|---|
| Pull | Download the changes made by others |
| Commit | Make a change to your local copy of a repository |
| Push | Push any local changes up to your repo in GitHub |
| Pull Request | Request that your changes be pulled into the main repository (aka PR) |



IVOA Roles

- IVOA Community
 - Raise issues
 - Fork repository
 - Make changes in forked repo
 - Raise pull requests
- Editors, working group chair & vice chair
 - Review and merge pull requests
- TCG chair and vice-chair
 - Create new repositories



Repository Organisation

- Master shows work on next version
 - Activity on the standard is publicly visible
- IVOA community updates master via pull requests
- Use tags to mark
 - v1.0-20191013-WD - Working draft releases
 - v1.0-20191014-PR - Proposed recommendations
 - v1.0-REC - Recommendation



Process Overview

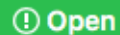
- We are using the GitHub flow
 1. Raise or find issue
 2. Fork repo
 3. Clone your repo
 4. Create branch for change
Named after the issue#
 5. Commit changes to branch
 6. Push to your repo
 7. Raise pull request



Exercise - Play along at home

<https://github.com/ivoa-std/VOTable/issues/4>

Exercise - Add a new author to the document #4



tomdonaldson opened this issue 8 minutes ago · 0 comments



tomdonaldson commented 8 minutes ago

Member



To practice with GitHub, add yourself or an innocuous cartoon character as an author of the VOTable document.

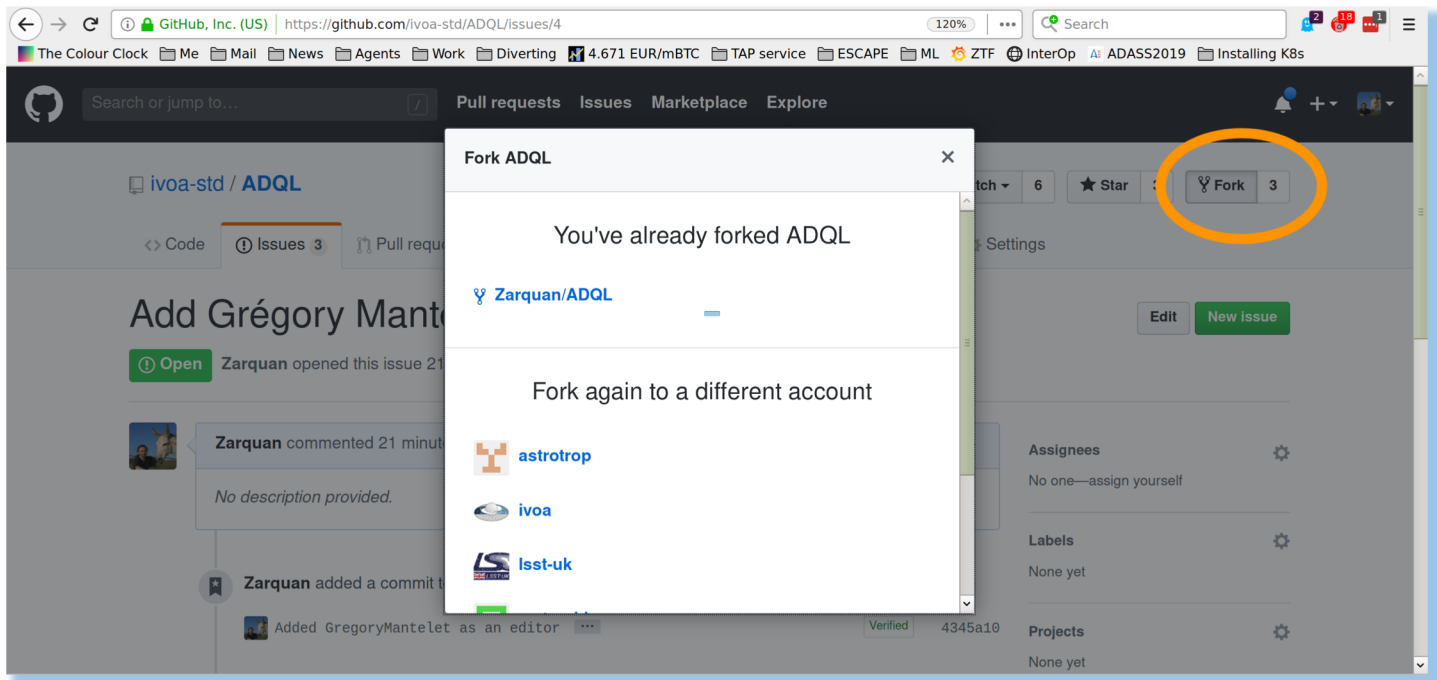


1. Raise or find issue

The screenshot shows a web browser window displaying a GitHub issue page. The address bar shows the URL <https://github.com/ivoa-std/ADQL/issues/4>. The page header includes the repository name **ivoa-std / ADQL** and navigation options: Unwatch (6), Star (3), and Fork (3). Below the header, there are tabs for Code, Issues (3), Pull requests (1), Projects (0), Wiki, Security, Insights, and Settings. The main content area features the issue title **Add Grégory Mantelet as editor #4** and a green **New Issue** button. A green **Open** status indicator is followed by the text "Zarquan opened this issue 20 minutes ago · 0 comments". The issue description is "No description provided." Below the description, there are two activity items: "Zarquan commented 20 minutes ago" and "Zarquan added a commit to Zarquan/ADQL that referenced this issue 16 minutes ago". The commit message is "Added GregoryMantelet as an editor" with a **Verified** badge and commit hash **4345a10**. On the right side, there are sections for Assignees (No one—assign yourself), Labels (None yet), and Projects (None yet).



2. Fork Repo





2. Fork Repo (2)

The screenshot shows a web browser displaying the GitHub repository page for 'Zarquan / ADQL'. The repository is a fork of 'ivoa-std/ADQL'. The page includes navigation links for Pull requests, Issues, Marketplace, and Explore. The repository name 'Zarquan / ADQL' is circled in orange. Below the repository name, there are buttons for Watch (0), Star (0), and Fork (3). The main content area shows the file 'ADQL / ADQL.tex' selected, with a commit message 'olebole Remove unused SVN tags' and 4 contributors. The file content is displayed in a code editor, showing LaTeX code for document class and packages.

Search or jump to... Pull requests Issues Marketplace Explore

Zarquan / ADQL
forked from ivoa-std/ADQL

Watch 0 Star 0 Fork 3

Code Pull requests 0 Projects 0 Wiki Security Insights Settings

Branch: master ADQL / ADQL.tex Find file Copy path

olebole Remove unused SVN tags f7916d0 on 9 May

4 contributors

3957 lines (3248 sloc) | 120 KB Raw Blame History

```
1 \documentclass[11pt,a4paper]{ivoa}
2 \input tthdefs
3
4
5 \usepackage[utf8]{inputenc}
6 \usepackage{tabularx}
```

<https://github.com/Zarquan/ADQL/projects> [\[mathtools\]](#)



2. Fork Repo (notes)

- PyVO Can be done just once or each time you work a new issue.
 - Should we recommend forking only once?
- It is recommended not to the master branch of your fork.
- You can delete your master branch:

```
git branch placeholder          # Create stub default branch
git checkout placeholder
git branch -D master
git push <git-user-name> placeholder
```

```
# Go to github and set default branch to placeholder, then
git push <git-user-name> :master
```



3. Clone Repository

The screenshot shows the GitHub interface for the repository 'jd-au / ADQL', which is a fork of 'ivoa-std/ADQL'. The repository has 109 commits, 1 branch, 1 release, and 4 contributors. The current branch is 'master'. A dropdown menu is open under the 'Clone or download' button, showing options to clone with SSH or HTTPS, and to download the ZIP file. The 'Open in Desktop' option is highlighted with an orange circle. Below the dropdown, a list of files is visible, including 'ivoatex @ b54911c', 'notes', '.gitmodules', 'ADQL-archdiag.png', 'ADQL.tex', and 'Makefile'.

jd-au / ADQL
forked from ivoa-std/ADQL

Watch 0 Star 0 Fork 4

Code Pull requests 0 Projects 0 Wiki Security Insights Settings

Astronomical Data Query Language Standard <https://wiki.ivoa.net/wiki/bin/view/...> Edit

Manage topics

109 commits 1 branch 1 release 4 contributors

Branch: master New pull request Create new file Upload files Find file Clone or download

This branch is even with ivoa-std:master.

Zarquan Merge pull request ivoa-std#1 from olebole/add-ivoatex-submodule ...

| File | Description | Time |
|-------------------|---|---------------|
| ivoatex @ b54911c | Add ivoatex submodule | 5 months ago |
| notes | Updated WD date | 5 months ago |
| .gitmodules | Add ivoatex submodule | 5 months ago |
| ADQL-archdiag.png | Updated architecture diagram | 2 years ago |
| ADQL.tex | Remove unused SVN tags | 5 months ago |
| Makefile | Undo changes from revision 4659 (fix them later). | 11 months ago |

Clone with SSH Use HTTPS

Use a password protected SSH key.

git@github.com:jd-au/ADQL.git

Open in Desktop Download ZIP

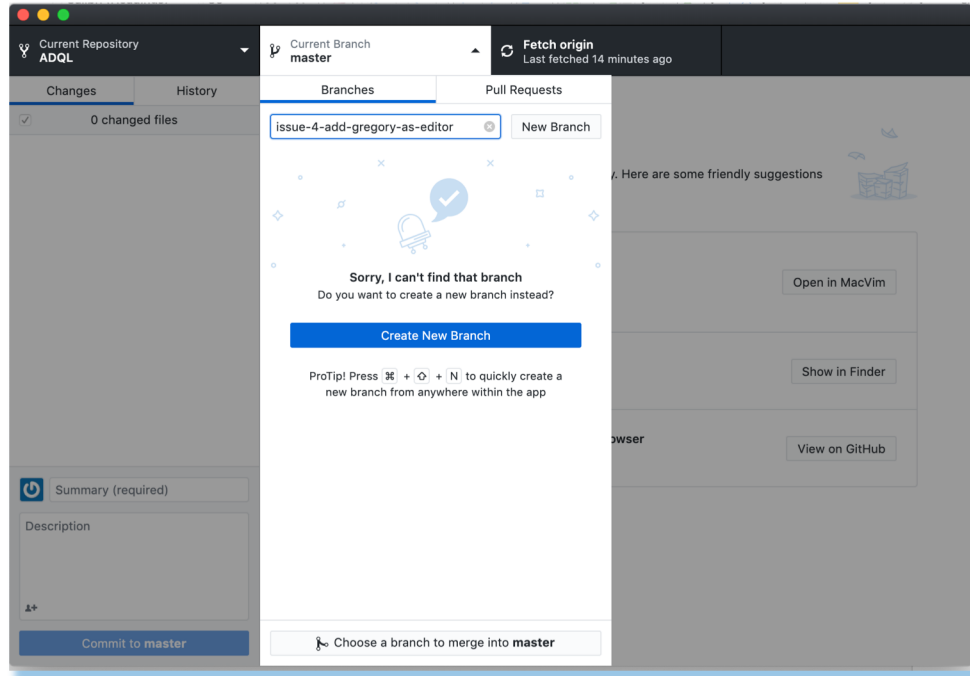


3. Clone Repository (command line)

- See commands
 - https://wiki.ivoa.net/internal/IVOA/InterOpMay2020Apps/ivoa_clone
- Edit to set git_user to your GitHub user name



4. Create Branch





4. Create Branch (command line)

- See commands
 - https://wiki.ivoa.net/internal/IVOA/InterOpMay2020Apps/ivoa_create_branch
- Edit to set git_user to your GitHub user name



4.5 Make some changes

- For VOTable, use ``make`` to build VOTable.pdf locally
- Edit appropriate files
 - VOTable.tex for this exercise



5. Commit changes to branch

Current Repository: ADQL

Current Branch: issue-4-add-gregory-as-e...

Publish branch: Publish this branch to GitHub

Changes: 1 changed file

ADQL.tex

```
@@ -35,6 +35,7 @@
35 35 \author{Yuji Shirasaki}
36 36 \author{Alexander Szalay}
37 37
38 38 +\editor[http://wiki.ivoa.net/twiki/bin/view/IVOA/GregoryMantelet]{Grégory Mantelet }
39 39 \editor[http://wiki.ivoa.net/twiki/bin/view/IVOA/DaveMorris]{Dave Morris}
40 40
40 41 \previousversion[http://www.ivoa.net/Documents/ADQL/2.0]{ADQL-2.0}
```

Update ADQL.tex

Description

Commit to issue-4-add-gregory-...



5. Commit changes to branch (command line)

- Use combination of these to review and commit changes

```
git status
```

```
git diff
```

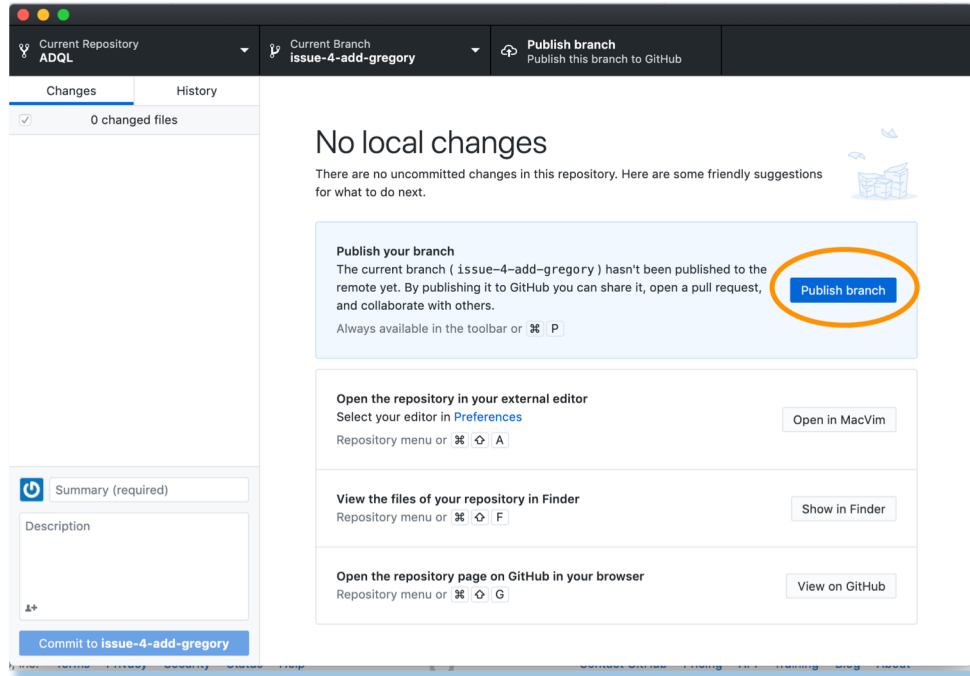
```
git add <files> # say which files will be committed
```

```
git checkout -- <file> # discard local changes to a file
```

```
git commit -m "<reason for commit>" # commit changes to your local clone
```



6. Push to your repo





6. Push to your repo (command line)

- If you set up your branch with the 'ivoa_create_branch' script

```
git push # Publishes commits to your Github repo
```




7. Raise Pull Request

The screenshot shows a Git client interface with the following elements:

- Header:** 'Current Repository ADQL', 'Current Branch issue-4-add-gregory', and 'Fetch origin Last fetched just now'.
- Left Panel:** 'Changes' tab with '0 changed files' and 'History' tab.
- Main Area:** 'No local changes' message with a suggestion to 'Create a Pull Request from your current branch'. The 'Create Pull Request' button is circled in orange.
- Bottom Panel:** 'Summary (required)' section with a 'Description' text area and a 'Commit to issue-4-add-gregory' button.
- Right Panel:** Three action cards: 'Open the repository in your external editor' (Open in MacVim), 'View the files of your repository in Finder' (Show in Finder), and 'Open the repository page on GitHub in your browser' (View on GitHub).



7. Raise Pull Request (2)

GitHub, Inc. (US) | <https://github.com/ivoa-std/ADQL/compare/master...Zarquan:issue-4-add-gregory-as-editor?> 120% Search

The Colour Clock Me Mail News Agents Work Diverting 4.671 EUR/mBTC TAP service ESCAPE ML ZTF InterOp ADASS2019 Installing K8s

Search or jump to... Pull requests Issues Marketplace Explore

ivoa-std / ADQL Unwatch 6 Star 3 Fork 3

Code Issues 3 Pull requests 1 Projects 0 Wiki Security Insights Settings

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

base repository: ivoa-std/ADQL base: master head repository: Zarquan/ADQL compare: issue-4-add-gregory-as-editor

✓ Able to merge. These branches can be automatically merged.

Added Gregory as editor

Write Preview AA B i “ <> @

Fix for issue #4 - Add Grégory Mantelet as editor

Reviewers No reviews—at least 1 approving review is required.

Assignees



7. Raise Pull Request (3)

The screenshot shows a GitHub pull request interface. At the top, there's a browser address bar with the URL `https://github.com/ivoa-std/ADQL/compare/master...Zarquan:issue-4-add-gregory-as-editor?&diff=split`. Below the browser, a file upload area contains the text "Attach files by dragging & dropping, selecting or pasting them." and a checkbox for "Allow edits from maintainers" which is checked. A green "Create pull request" button is visible. The pull request summary shows "1 commit", "1 file changed", "0 commit comments", and "1 contributor". The commit history shows a commit by "Zarquan" on Oct 12, 2019, with the message "Added Gregory as editor". The diff view shows a single file change in `ADQL.tex`, with a diff of `@@ -35,6 +35,7 @@`. The diff content shows the addition of a new editor entry for Gregory Mantelet.

Attach files by dragging & dropping, selecting or pasting them.

Allow edits from maintainers. [Learn more](#) Create pull request

1 commit 1 file changed 0 commit comments 1 contributor

Commits on Oct 12, 2019

Zarquan Added Gregory as editor Verified 3ca0741

Showing 1 changed file with 1 addition and 0 deletions. Unified Split

```
1 ADQL.tex
@@ -35,6 +35,7 @@
35 35  \author{Yuji Shirasaki}
36 36  \author{Alexander Szalay}
37 37
38 + \editor[http://wiki.ivoa.net/twiki/bin/view/IVOA/GregoryMantelet]{Grégory Mantelet }
38 39  \editor[http://wiki.ivoa.net/twiki/bin/view/IVOA/DaveMorris]{Dave Morris}
39 40
```



7. Raise Pull Request (4)

The screenshot shows a GitHub pull request page for the repository 'ivoa-std / ADQL'. The pull request title is 'Added Gregory as editor #8'. It shows a merge from 'Zarquan:issue-4-add-gregory-as-editor' to 'ivoa-std:master'. The pull request is currently open. The page includes navigation tabs for Code, Issues (3), Pull requests (2), Projects (0), Wiki, Security, Insights, and Settings. A comment from Zarquan is visible, stating 'Fix for issue #4 - Add Grégory Mantelet as editor'. The pull request details show 1 commit, 0 checks, and 1 file changed. The right sidebar indicates that no reviews are required and no assignees are assigned. A purple notification bubble with the number '1' is present in the bottom right corner.



7. Raise Pull Request (5)

The screenshot shows a GitHub pull request page for repository `ivoa-std/ADQL`, pull request #8. The title is "Added Gregory as editor #8". The description states "Zarquan wants to merge 1 commit into `ivoa-std:master` from `Zarquan:issue-4-add-gregory-as-ed1...`".

The commit history shows one commit: "Added Gregory as editor" (verified, 3ca0741).

Below the commit, a message reads: "Add more commits by pushing to the `issue-4-add-gregory-as-editor` branch on `Zarquan/ADQL`."

Two error messages are displayed:

- Review required:** At least 1 approving review is required by reviewers with write access. [Learn more.](#)
- Merging is blocked:** Merging can be performed automatically with 1 approving review.

A "Merge pull request" button is visible, along with a link to "view command line instructions".

On the right side, there are sections for "Assignees" (No one—assign yourself), "Labels" (None yet), "Projects" (None yet), "Milestone" (No milestone), and "Notifications" (Customize). An "Unsubscribe" button is also present.

At the bottom, there is a comment section with a "Write" button, a "Preview" button, and a text input field labeled "Leave a comment".



Editor - Review Pull Request

ivoa-std / ADQL

Unwatch 6 Star 3 Fork 3

Code Issues 3 Pull requests 2 Projects 0 Wiki Security Insights Settings

Added Gregory as editor #8

Edit

Open Zarquan wants to merge 1 commit into ivoa-std:master from Zarquan:issue-4-add-gregory-as-editor

Conversation 0 Commits 1 Checks 0 Files changed 1 +1 -0

Changes from all commits File filter... Jump to... 0 / 1 files viewed Review changes

ADQL.tex

```
@@ -35,6 +35,7 @@
35 35 \author{Yuji Shirasaki}
36 36 \author{Alexander Szalay}
37 37
38 + \editor[http://wiki.ivoa
38 39 \editor[http://wiki.ivoa
39 40
40 41 \previousversion[http://
```

Write Preview

Leave a comment

Attach files by dragging & dropping, selecting or pasting them.

- Comment
Submit general feedback without explicit approval.
- Approve
Submit feedback and approve merging these changes.
- Request changes
Submit feedback that must be addressed before merging.

Submit review



Make a change to PR - Scenarios

Scenario 1 – Simple case

- Go back to your local clone
- Make change
- Commit and push as above
- Changes will automatically show up in PR



Make a change to PR - Scenarios (2)

Scenario 2 – You have accepted a change suggestion within the PR website and you want to make another change.

- Go back to your local clone
- Press the 'Fetch from origin' button in GitHub Desktop
- Or command line:
`git pull`
- Make changes
- Commit and push as above
- Changes will automatically show up in PR



Make a change to PR - Scenarios (3)

Scenario 3 – Other PRs have been merged, and you need to integrate those changes into your branch.

- Go back to your local clone
- Press a GitHub Desktop button?
- Or command line fetch and rebase from ivoa-std master

```
git fetch ivoa-std
git rebase ivoa-std/master <branch-name> # then resolve conflicts
```

 - (see https://docs.astropy.org/en/stable/development/workflow/development_workflow.html#how-to-rebase for similar Astropy guidance)
- Make changes
- Commit and push as above
- Changes will automatically show up in PR



Editor - Merge Pull Request

Added Gregory as editor #8 Edit

[Open](#) Zarquan wants to merge 1 commit into `ivoa-std:master` from `Zarquan:issue-4-add-gregory-as-editor`

Conversation 0 Commits 1 Checks 0 Files changed 1 +1 -0

Zarquan commented 3 hours ago Member +😊 ⋮

Fix for issue #4 - Add Grégory Mantelet as editor

Added Gregory as editor Verified `3ca0741`

jd-au approved these changes now View changes

Add more commits by pushing to the `issue-4-add-gregory-as-editor` branch on `Zarquan/ADQL`.

Changes approved Show all reviewers
1 approving review by reviewers with write access. [Learn more.](#)

1 approval ▼

This branch has no conflicts with the base branch
Merging can be performed automatically.

Merge pull request ▼ You can also [open this in GitHub Desktop](#) or view [command line instructions](#).

Reviewers ⚙️
jd-au 🔄 ✓

Assignees ⚙️
No one—assign yourself

Labels ⚙️
None yet

Projects ⚙️
None yet

Milestone ⚙️
No milestone

Notifications Customize
Unsubscribe
You're receiving notifications because you're watching this repository.

2 participants



Change Complete

<> Code | Issues 3 | **Pull requests 2** | Projects 0 | Wiki | Security | Insights | Settings

Added Gregory as editor #8 Edit

Merged jd-au merged 1 commit into `ivoa-std:master` from `Zarquan:issue-4-add-gregory-as-editor` 44 seconds ago

Conversation 0 | Commits 1 | Checks 0 | Files changed 1 +1 -0

Zarquan commented 4 hours ago Member + 😊 ...

Fix for issue #4 - Add Grégory Mantelet as editor

Added Gregory as editor Verified 3ca0741

jd-au approved these changes 3 minutes ago View changes

jd-au merged commit `ad5c1d8` into `ivoa-std:master` 44 seconds ago Revert

Reviewers Settings

- jd-au** ✓

Assignees Settings

No one—assign yourself

Labels Settings

None yet

Projects Settings

None yet



Change Complete - Notes

- Delete your branch in most cases
 - If branch deleted on GitHub website, it still needs to be deleted on your local clone if you want to reuse the clone.
 - Can be deleted in GitHub Desktop under Repository menu
 - Can be deleted on command line:

```
git branch -D <branch-name>
```



```
# If *not* deleted on GitHub yet, then push the deletion  
git push <git-user-name> :<branch-name>
```
- Only delete your fork if you don't want to reuse it



Useful Tools

- Documentation

- GitHub flow - <https://guides.github.com/introduction/flow/>
- How to fork a repo - <https://guides.github.com/activities/forking/>
- GitHub Issues - <https://guides.github.com/features/issues/>

- Desktop Tools

- GitHub Desktop
- Atlassian SourceTree
- GitKraken