FOSS4G 2016

One year of Open Governance for OTB: thoughts and context

OTB Team

August 2016

Things to know about OTB. . .

Orfeo ToolBox is :

- An image processing library for remote sensing
- Free and open source software under CeCILL-v2 license (equivalent to GPL)
- Funded and developed by CNES (French Space Agency) in the frame of the Orfeo Pléiades program (and beyond)
- Used at CNES, ESA (European Space Agency), scientific projects, in some public administration (mostly French)
- Written in C++ on top of ITK (medical image processing)
- Built on the shoulders of giants (GDAL, OSSIM, OpenCV. . .)
- Big Data capable, thanks to built-in streaming and multithreading

Topic

The aim of this presentation is :

- To give an overview of OTB incubation process
- To describe how Orfeo ToolBox project worked until PSC creation (March 2015)
- To explain what the PSC is and how it works
- To sketch the possibilities offered by this new, more open governance

OSGeo incubation

- Incubation committee : responsible for overseeing the incubation process for new projects
- OTB apply in 2011
- Start again the incubation process in 2013 -> mentor : Landon Blake
- Checklist to complete the incubation
- Long process, lead to sometimes long discussions. . .
- But IMHO very valuable for OTB to improve and structure the project

OTB incubation checklist

- OSGeo wiki :
  https://wiki.osgeo.org/wiki/OTB_Project_Incubation_Status

Status report

- Infrastructure Transition (website, source access. . .) -> OK
- Community Functioning -> Set up OTB Project Steering Committee (PSC) and project procedures -> OK
- Foundation Membership -> brand OTB site with OSGeo foundation -> OK
- Code Copyright Review and Committer Responsibilities Guidelines -> In progress

OTB decision making process before the PSC

the benevolent dictatorship dynasty

Who makes feature requests

- ► Users from Orfeo CNES program (main funding source for 8 years)
- ► CNES team (based on feedback from ml and orfeo)
- ► Users from mailing list

Who decides

- ► CNES team with support of CS dev team (contractor)

Who actually writes code

- ► CS dev team (funded by CNES)
- ► CNES team
- ► other contributors

Why changing ?

Transparency

- Users are often informed afterward of major changes
- No insight on motivations behind some decisions
- Difficult to participate in decision making
- OTB is a big project now, someone may want to get involved more deeply

For more, easier contributions

- what was the process for contributing code to OTB ?
- how can I know if my contribution will be accepted ?
- if I contribute a lot, do I get a grip on decision making ?

For sustainability

- What if, one day, CNES stops funding OTB at the current level ?
- We need new actors to be able to get involved in OTB !

Happy birthday PSC !

- One year ago, CNES decided to set-up an open-governance for OTB
- We now have a working PSC, with :
  - Members
  - Rules
  - Decisions
- Highly inspired by other OSGeo projects

Name	Affiliation	Role
Victor Poughon (chair)	CNES	Infrastructure, legal issues
Rémi Cresson	IRSTEA	Release Manager for release 5.2
Guillaume Pasero	CS-SI	release planner
Jordi Inglada	CESBIO	User support, roadmaps
Julien Michel	CNES	Communication, contributions

# PSC, git workflow, release process : high coupling

PSC established (or endorsed) a set of highly coupled process :

- ▶ RFC process
- ▶ The git workflow
- ▶ The testing/dashboard strategy
- ▶ The release process
- ▶ The packaging strategy

A short reminder of RFC process

1. Request for Comments
2. Comments and discussions
3. Developments
4. Requests for changes
5. Review
6. PSC Vote
7. Request for Merge
8. Approval by Release Manager
9. Merge

A short reminder of Git workflow
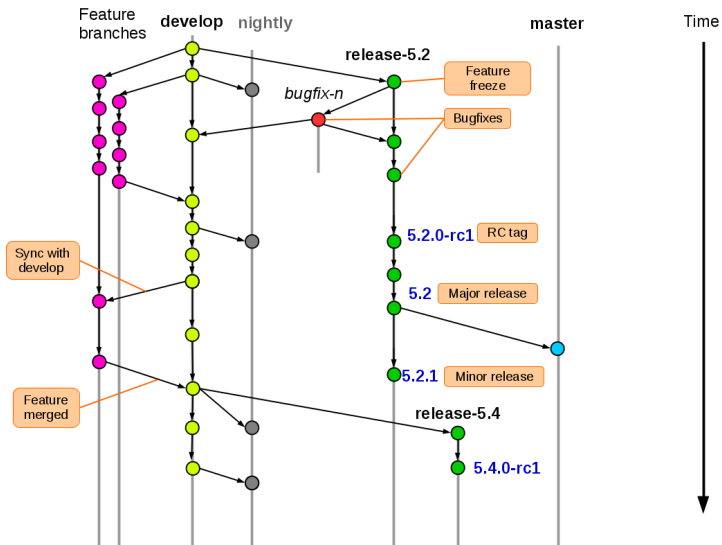
A short reminder of release process

1. Release manager accepts Requests for Merge corresponding to PSC approved Request for Changes

2. Every 3 months, at a planned date, Release Manager branches develop which becomes the Release Candidate

3. After one or two weeks of testing and fixing, release is announced

Facts and figures

Request for changes
http://wiki.orfeo-toolbox.org/index.php/Requests_for_Changes
- OTB 5.2 : 19 Requests for Changes
- OTB 5.4 : 14 Requests for Changes
- OTB 5.6 : 14 Requests for Changes
- Pending : 4 Requests for Changes

Requests for comments
http://wiki.orfeo-toolbox.org/index.php/Requests_for_Comments
- 34 Requests for Comments

. . . for users

- Every significant ongoing or passed change is now public and visible
- Users have the opportunity to comment on pending Request for Changes during review
- There are more details available on why and how things were done (and discussions)
- Users can file new Request for Comments to request new features
- Releases are more frequent

. . . for contributors

- There is a clear and detailed process on how to get your code in OTB
- Contributors are guaranteed to be treated with equity
- They know the deadline to get their feature into next release

. . . for developers

- No more silent merging of your 100+ commits branch
- Some adjustments needed :
  - Accept comments from review
  - Getting the code merged takes more time
- On the bright side, less surprises on the *develop* branch
- They know the deadline to get their feature into next release

Are we making a better OTB ?
Pros.

On the overall, I think that we do.

- We have more code reviews, from external reviewer
- Changes are more consistent because they belong to the same RFC
- Everyone gets to give his opinion
- New features are more visible

Are we making a better OTB ?
Cons.

- PSC is still small and has a lot of CNES in it
- Apart from CNES/CS funded by CNES/CS, we have very few requests for changes
- We do Gerrit. By Hand.
- We still have broken dashboards, packages, and third party issues

Is voting really required ?

- PSC never voted -1 (or even +0)
- Upon RFC, what really happens :
  - PSC members (and others) make comments
  - No vote is casted until those comments are addressed
- Indeed no RFC has been rejected
- But some are still waiting for enough +1
- Shall we replace vote by a simpler approval system ?

Do comments become changes ?

Request for comments

- We have a lot of Request for Comments
- They describe some new idea, like a white-paper
- Once the idea is submitted, they do not remain active very long

Request for changes

- We have a lot of request for changes that do not come from request for comments
- It means that work is already done and we can only discuss the details
- Sometime review shows that the feature was in fact unclear
- Make it mandatory ?

PSC meetings

- There has been 4 IRC meeting in between 2015 and 2016 user days
- Logs and minutes are available on the wiki
- Only place where important matters (other than RFC) are discussed

Final thoughts on PSC

- The PSC is young (the entity, not its members . . .)
- It is a tool that can be adapted to best serve the interest of Orfeo ToolBox
- Anything can be discussed and modified : processes, scope, rules, members. . .

Code provenance review since 2016

- ▶ All OTB dependencies are license in Apache/MIT
- ▶ All contributions licensed in CeCILL
- ▶ No contributor agreement for committers (no CLA, CCLA) but list of contributors and copyright managed properly
- ▶ Manage properly since the beginning of the project
- ▶ OTB in DebianGIS allows also to make some progress
- ▶ Discussion (initiate by CNES) to move OTB license from CeCILL to Apache

Strategy for code review in 2016

- Check (again) the compatibility of third part libraries with OTB
  - OK
  - 6S (Radiative transfer) : provided with no license -> working on it
- Code provenance review :
  - List all files and identify contributors
  - Completed
  - Contributors have been contacted to sign a CLA (adapted from Apache CLA)

Moving from GPL to Apache

How does Apache 2.0 license differ from GPL ?

- ► Permissive
- ► Apache : you're not required to distribute the source code of a covered work

Re-licensing

- ► Code provenance review and contributor agreements is necessary condition
- ► But not sufficient ! Also need to be discuss thorough an RFComments and a RFC
- ► Would not change much things for most users and contributors
- ► CNES committed to continue to contribute to the library

Conclusion

- OSGeo incubation starts in 2011 (first application)
- Not far for OTB to be a member
- Being an official OSGeo software will perhaps not change lots of thing...
- ...but I think that the incubation helps OTB to have a more open
- Code provenance review completed
- Moving to GPL to Apache was already discuss on OTB blog but it should lead to an RFC and discussion (their is already a RFComments)

Questions ?