

# Wrap-up and Conclusions

Antonio S. Cofiño  
2020 CF Workshop  
9-11 June 2020



is-enes  
INFRASTRUCTURE FOR THE EUROPEAN NETWORK  
FOR EARTH SYSTEM MODELLING



# The Venue: ~~Santander~~, ~~Spain~~ Thanks COVID-19!

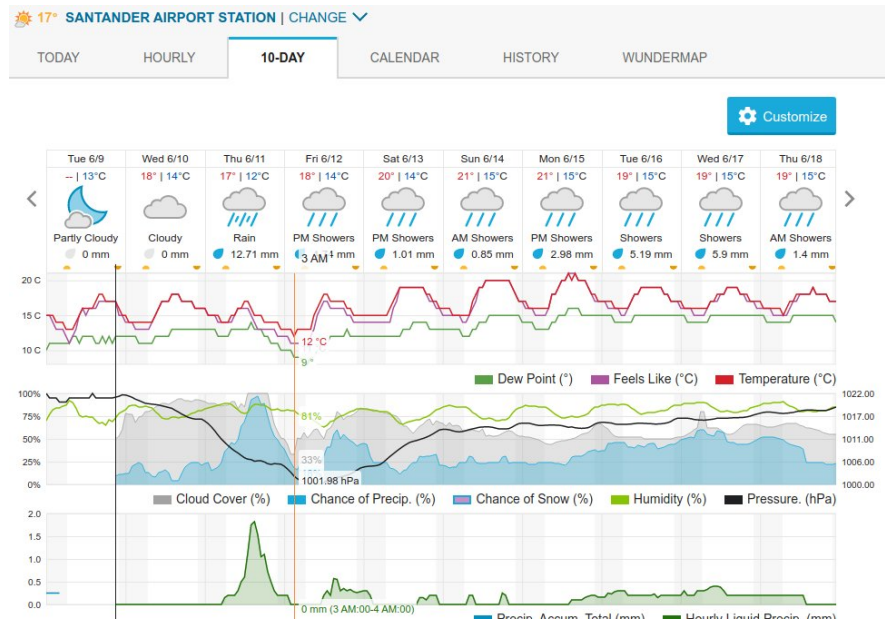


# The Venue: ~~Santander, Spain~~ Thanks COVID-19!

The weather was not that good.



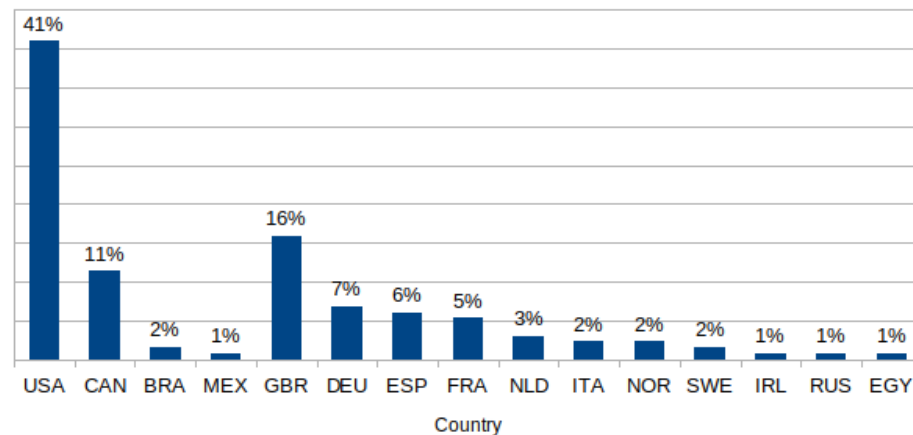
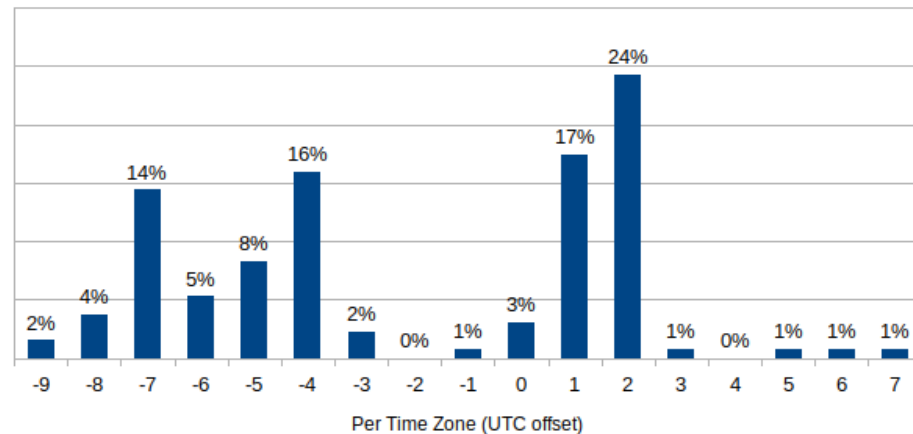
source: [@eltomavistas](#) by [Eva Miguélez](#)



# The good: Registration

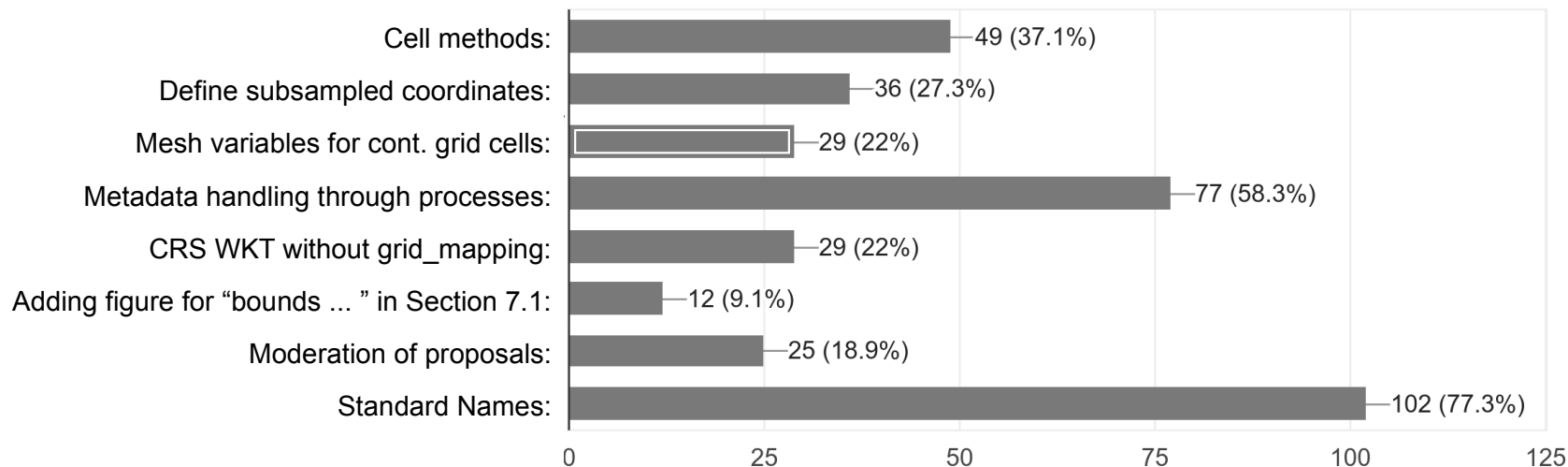
- 132 Registrants
- 15 Time Zones
  - 3-5 possible “out-liars”
- 15 Countries
  - 71 reg. from North America
  - 59 reg. from Europe

Registrants (132 total)



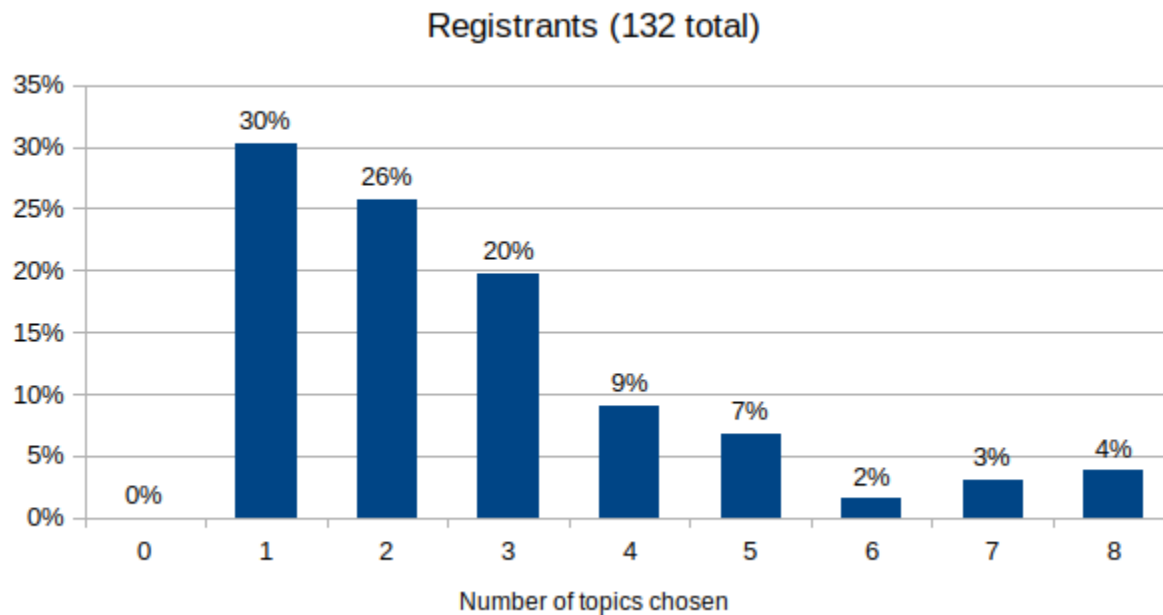
# Topic interest

132 registrants with multiple options



# Topic interest

Number of topics chosen by registry:



# Participation

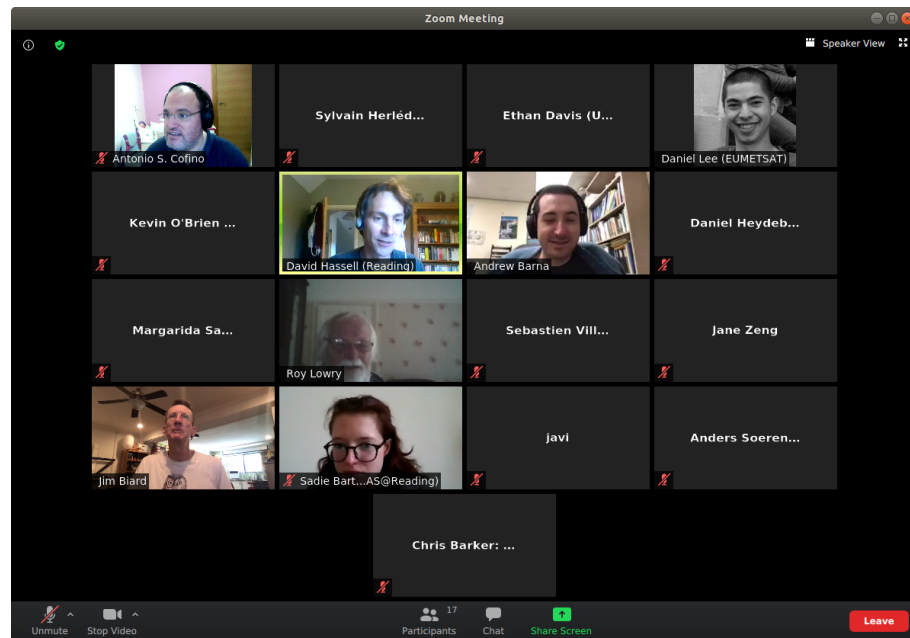
- **65-90 participants in plenary sessions**
  - Thanks to EUMETSAT for providing virtual Rooms
  - Virtual meeting preparation it's a technical challenge
  - Thanks to D.Lee for setting-up
- Per topic:
  - Cell methods: **21 participants**
  - Define subsampled coordinates: **10 participants**
  - Mesh variables for cont. grid cells: **Cancelled**
  - Metadata handling through processes: **32 participants**
  - CRS WKT without grid\_mapping: **4 participants**
  - Adding figure for “bounds ... ” in Section 7.1: **6 participants**
  - Moderation of proposals: **6 participants**
  - Standard Names: **37 participants**



# Participation

## The Virtual Social Hour:

- Not too much success,
  - but ongoing request to Zoom for providing “Beer/Wine/WEYLTD” feature.





# Wrap-up and conclusions

CF principles:

- Data should be self-describing: no external info needed to interpret it
- Driven by use-cases
- Practicable for both data-writers and data-readers
- Metadata easily parsed by humans as well as computer programs
- Minimise redundancy and any other possibilities for silly mistakes



# Wrap-up and conclusions

CF Governance principle: CF it's a community effort

- CF Community: who use and contribute to CF
  - Anyone can contribute by proposing changes and participating in discussions
- What is to be community driven?:
  - Recruit new community members increasing perception and reach
  - Learn how the community relates with CF, how the community uses CF.
  - Provide new and helpful resources to community and educate on topics
- Are we there? What is needed/missing?
  - More/Any training, tutorials, hands-on, tools ....



# Wrap-up and conclusions

CF GovernCF conventions and standard name committee:

- One chair (K.Taylor), 2 secretaries (A.Pamment and D.Hassell) and 11 more members made up from active contributors.
- Moderate proposals, contribute and develop CF
- **CF Governance Panel**
  - 5 members: E.Davis (Chair, UCAR/Unidata, USA), J.Gregory (NCAS/UReading, UK) , B.Lawrence (NCAS, UK) , D.Lee (EUMETSAT, EU) and K.Taylor (PCMDI/LLNL, USA).
  - Representatives from significant contributors
  - Promote the CF usage and stewardship
  - Appoint the chair of CF Committee

ance principle: CF it's a community effort



# Wrap-up and conclusions

Process to change CF Conventions:

- Anyone can propose changes or bring-up issues
  - Changes are discussed
  - Moderator summarize
  - Decision made by consensus
  - Change agreed:
    - 3 weeks without significant contribution
    - 3 contributors, and at least 2 committee members support
- Guidelines in [CONTRIBUTING.md](#) should help: more details at D.Lee presentation.



# Wrap-up and conclusions

- Workflow migration to Github on Nov-2019
- Learn new GH tech and process: PR, commits, Markdown, AsciiDoc, ... overwhelming?
- The cf-metadata mail list it's no more in use.
- The Trac site, it's no more in use.
- Both (mail list and trac) are a invaluable source of knowledge that needs to be curated:
  - CF conversations since 2002 to 2019.
    - <http://mailman.cgd.ucar.edu/pipermail/cf-metadata/>
  - Trac site with valuable open issues:
    - What to do with them?
    - <https://cf-trac.llnl.gov/trac> (no-reliable)
- Some tidy-up on [CF web page](#) it's needed

## [CF-metadata] test

Brian Eaton [eaton@near.ucar.edu](mailto:eaton@near.ucar.edu)

Tue Mar 19 18:15:06 MST 2002

- Next message (by thread): [\[CF-metadata\] Re: CF NetCDF Conventions](#)
- Messages sorted by: [\[date\]](#) [\[thread\]](#) [\[subject\]](#) [\[author\]](#)

test

Brian Eaton  
 Climate Modeling Section  
 National Center for Atmospheric Research  
 P.O. Box 3000, Boulder, CO 80307

email: [eaton@ucar.edu](mailto:eaton@ucar.edu)

## CF Metadata

NetCDF Climate and Forecast Metadata Convention

Search

[Login](#) [Preferences](#) [About Trac](#) [Help/Guide](#)

[View Tickets](#) [Roadmap](#) [Timeline](#) [Search](#) [Wiki](#)

Custom Query (50 matches)

Filters

Status  accepted  assigned  closed  new  reopened

And  Or

Columns

Group results by   ascending Show under each result:  Description Max items per page 100

Ticket	Summary	Status	Owner	Type	Priority	Milestone
#195	Invalid "ld" values in CF Standard Name aliases	new	cf-standard-names@...	defect	low	Milestone
#24	Common Concept: vocabulary with mapping to CF attributes	new	cf-conventions@...	enhancement	medium	
#27	Use namespace tags to include other conventions in netcdf files without repeating them in CF	accepted	edavis	enhancement	medium	
#29	Common Concept subtopic: CDL as constraint language	new	cf-conventions@...	enhancement	medium	
#38	Coordinate Systems checks for CF-1.1	new	cf-checker@...	task	medium	
#53	Incorrect error when missing_value and _FillValue are NaN	new	cf-checker@...	defect	medium	
#59	Conventions for radial RADAR and LIDAR data	new	cf-conventions@...	enhancement	medium	
#68	CF data model and reference implementation in Python	new	cf-conventions@...	enhancement	medium	
#73	Rename Appendix G as Appendix Z	accepted	davidhassel	defect	medium	
#78	CF aggregation rules	new	cf-conventions@...	enhancement	medium	
#79	Handling and formatting of vector quantities in CF	reopened	cf-conventions@...	enhancement	medium	
#82	Extend cell_methods attribute to document multi-step operations on a variable	new	cf-conventions@...	enhancement	medium	
#90	Collection of CF enhancements for interoperable applications	new	cf-conventions@...	enhancement	medium	
#91	review of standard_names for interoperability	new	cf-standard-names@...	task	medium	
#94	Proposal for a CF String Syntax (CFSS)	accepted	lowry	enhancement	medium	
#95	Development of CF 1.5 Data Model	new	cf-conventions@...	task	medium	
#96	Julian/Gregorian calendar name and constraints	new	cf-conventions@...	enhancement	medium	
#97	Multiple staggers in GRIDSPEC	new	cf-conventions@...	enhancement	medium	
#98	Clarify constraints on ancillary variable use	new	cf-conventions@...	defect	medium	
#101	Correct error in introductory text of Section 4.4 -- definition of 'year'	new	cf-conventions@...	defect	medium	
#107	CF Data Model 1.7	new	cf-conventions@...	task	medium	
#108	Defining a domain for a cell_method	new	cf-conventions@...	enhancement	medium	
#113	Review of CF feature types	assigned		enhancement	medium	
#115	add CF-SWEET updated mappings document, as appropriate	new	cf-standard-names@...	enhancement	medium	
#116	remove AMIP and PCMDI codes	new	cf-standard-names@...	task	medium	
#117	add example to 5.7 for multi-time dimension data	new	cf-conventions@...	enhancement	medium	
#142	Coordinate Type: Ensemble	new	cf-conventions@...	enhancement	medium	
#151	Clarification of use of standard region names in "region" variables.	new	cf-conventions@...	enhancement	medium	
#152	Time mean over area fractions which vary with time	new	cf-conventions@...	enhancement	medium	
#153	Requirements related to specific standard names	new	cf-conventions@...	enhancement	medium	

# Wrap-up and conclusions

## CF Standard Names

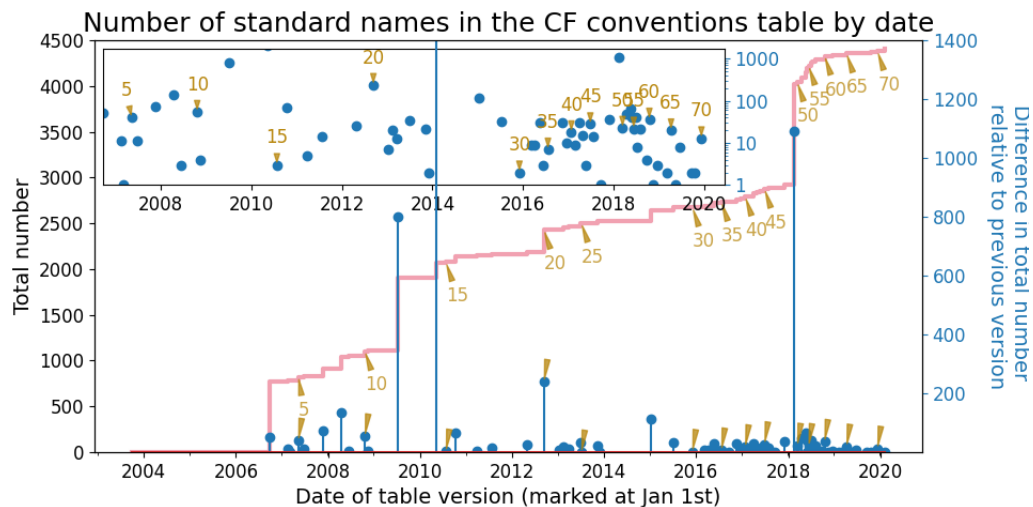
- What is and how the standard name process works
- Any member of community may propose and comment on proposals.
- Fast track for existing similar terms
- The CF standard names committees vote in case no consensus
- The rules: [http://cfconventions.org/standard\\_name\\_rules.html](http://cfconventions.org/standard_name_rules.html)



# Wrap-up and conclusions

## CF Standard Names

- The CF standard name grows:
  - <https://github.com/cf-convention/cf-convention.github.io/issues/110>



by S.L. Bartholomew



# Wrap-up and conclusions

## CF Standard Names

- Ontologies: towards a formal representation of CF standard names and its publication:
  - <https://github.com/cf-convention/discuss/issues/51>
  - <https://mmisw.org/ont/cf/parameter>
  - Parsing CF standard names, J.Gregory (2010):
    - [http://www.met.rdg.ac.uk/~jonathan/CF\\_metadata/14.1/](http://www.met.rdg.ac.uk/~jonathan/CF_metadata/14.1/)
    - Grammar, Uses, Derivation, Direction, Lexicon, Patterns, Standard names and analysis.

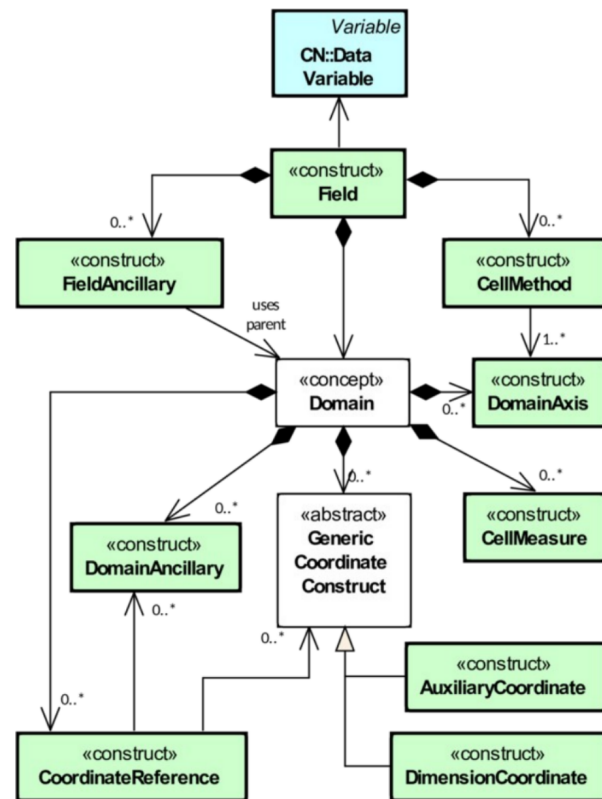




# Wrap-up and conclusions

## CF Roadmap

- Long period with no releases:
  - CF-1.6 (2012) to CF-1.7 (2017).
  - Very active period but not outcome release.
  - Dedicated human resources it's a key
- CF-1.8 in beginning of 2020
  - Netcdf4 Group and String type support, no more netcdf4 only classic data model
- CF-1.9 before 2021 CF Workshop:
  - Appendix for the CF Data model: A formal representation for the CF Conventions
- Proposal for 6 months release cycle



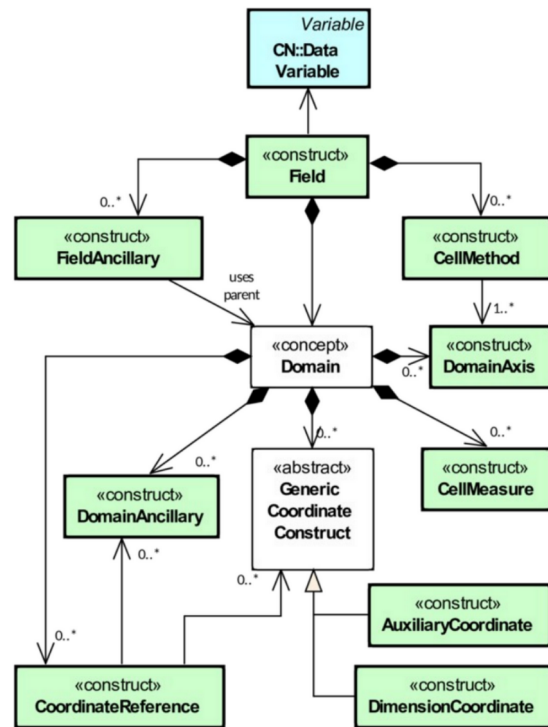
# Wrap-up and conclusions

## CF software

- CF checkers:
  - CEDA/NCAS CF-Checker
    - [CF Conformance Requirements and Recommendations document](#)
    - <https://github.com/cedadev/cf-checker>
  - IOOS Compliance Checker
    - Plugin based, CF checks, ACDD, NCEI templates
    - <https://github.com/ioos/compliance-checker>
- cfdm - python package
  - implementation of the CF data model
  - <https://ncas-cms.github.io/cfdm/>

Call for contributing to CF Software page:

- <http://cfconventions.org/software.html>
- If your software tool is not listed, please submit issue to CF Discuss repo:
  - <https://github.com/cf-convention/discuss/issues>



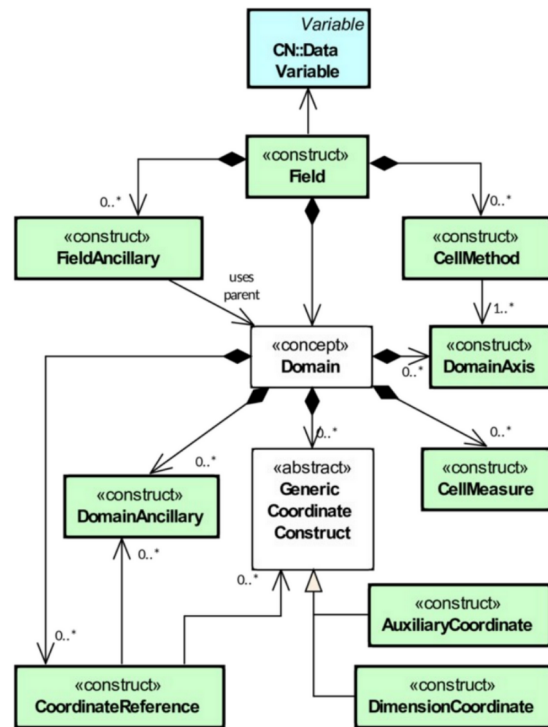
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# Wrap-up and conclusions

- What do I have miss?
- What are you missing from the workshop?
  - Any important topic discussion?,
  - Some general discussion?
- What organization issues have you find?
- How can we improve forthcoming CF workshops?

**Please comment now! Or write down on the google-doc  
Your feedback, as community member, is important!!**



# Wrap-up and conclusions

- Thanks to presenters.
- Thanks to breakout topic sessions chair and reporteaus.
- Thanks to 2020 CF workshop committee:
  - Jim Biard, Dave Blodgett, Kevin O'Brien, Antonio Cofiño, Ethan Davis, David Hassell, Jessica Hausman, Aleksandar Jelenak, Daniel Lee, Jonathan Yu
  - It has been a challenge to organize this virtual workshop
  - Blame to workshop committee for any issue:
    - CF Governance Panel as subsidiary ;)

**Thank you, as community, for participating and contributing to CF.  
Plan the next 2021 CF Workshop**

