7th ACCORD STAC meeting

Wednesday 5 June 2024
9-12 CEST
online

Minutes

Flat-Rate ALADIN MoU5 Representatives	Rafiq Hamdi (Belgium)
	Yelis Cengiz (Turkey)
	Rahma Ben Romdhane (Tunisia) *(from 10:15 CEST)*
RC-LACE-MoU5 Representatives	Christoph Wittmann (Austria)
	Kristian Horvath (Croatia): absent
	Simona Tascu (Romania)
HIRLAM-C Representatives	Saji Varghese (Ireland) **STAC Chair**
	Sami Niemelä (Finland)
	Xiaohua Yang (Denmark)
Météo-France Representatives	François Bouyssel **STAC vice-Chair**
	Alain Joly *(from 9:30 CEST)*
	Christine Lac
ACCORD PM	Claude Fischer
ACCORD CSS	Anne-Lise Dhomps
ECMWF Observer	Steve English

1. Opening

Saji opened the meeting.

2. Adoption of the draft agenda

Saji introduced the items of the agenda and opened the floor for comments on the agenda or to make proposals for A.O.B.
No comments.
The agenda was adopted.

3. Review of scientific strategy

Claude presented the procedure to establish the strategy document.

Regarding the preparation, we had 5 TT working on 5 thematics. The TTs produced outcome notes following guidelines prepared by the ACCORD/MG. These outcome notes were the main input for the Strategy workshop in Toulouse 21-24 May. We had 25 persons attending the workshop on invitation (MG, TT co-chairs, a few additional experts).

The workshop has been very productive with extremely intensive work. Broadly presented, the workshop was in three main parts: first an overview of the outcome of the TTs (plenary), then some grouped discussions on specific points of attention and first drafting of proposals per area, and eventually plenary session for a wrap-up, organize some on-the-spot cross-reading and closing discussion (next steps).

During the closing discussion, several workshop participants expressed their strong motivation to continue to be active on the preparation of the strategy and the updates of the draft document. They expressed a certain ownership on the content of the draft document.

Regarding the draft outcome, unlike originally expected (i.e. a fairly bullet-style content), the outcome draft document is a fully written text (which however requires some tidying-up).

Claude provided an (albeit partial and personal) overview of some headlines of the content of the strategy proposal. Claude insisted only on MQA and System+Codes, as he believes that these are areas where the new strategy contains significantly new goals and increased ambitions.

Strategy preparation: structure of the draft strategy document

- Header including the general goals, the link with and impact of international collaborations, an executive summary
- 6 thematic sections:
    - forecast model (incl coupling)
    - DA (incl surface and coupled DA)
    - probabilistic forecasting and EPS
    - MQA
    - Codes & System
    - an AI/ML strategy component (interfacing ACCORD with the wider European initiatives)

Strategy preparation: PM's highlights on new goals and higher ambitions - MQA

- Further develop and regularly apply common methods/metrics for verification of HIW/VHR
- **Enhance the use of new observations in verification and validation**
- **Design improved procedures for validation of model components** (process-oriented validation), to be implemented already at the research level
- Further develop common software for data analysis, verification and display. Enhance and modernize "harp", **add other tools such as MUSC. Make available a benchmark database of non-conventional observations relevant for VHR model validation**

- As a result, **improve and make more homogeneous the practices of verification**
- **Strengthen user-developer feedback and interaction**

Claude stressed the **broad-character items** on his slide, which represent new goals for phase 2. The intention behind these goals is to strengthen and promote case-oriented and process-oriented validation in research, make available new observational datasets for validation of VHR model experiments and further develop and make available the appropriate tools. A benchmark dataset also is proposed. Reaching these goals will help improve and standardise the validation and verification work across the consortium.

About user feedback, Claude pointed out that the organization of user feedback still is in its very early stages today, and this activity probably will still require some management and organizational efforts in the beginning of phase 2.

Strategy preparation: overview of content - System & Codes (this slide "codes")

- code management: continue to increase the efficiency of our working practices regarding codes (use of the forge, **enhance technical testing capabilities, improve code contribution process, improve documentation** associated to "pull requests" etc.)
- code refactoring and adaptation (CRA): **finish the refactoring of the model time step codes, increase our efforts on adapting these codes** to various platforms and make performance evaluation *(note: we assume that the DA codes would not be adapted in a foreseeable future)*

Claude stressed in this slide the goal to continue enhancing the capabilities of the technical tests used during the integration process (DAVAÏ). Also continue to promote the use of the source code forge, possibly assess whether (or how) additional functionalities could be implemented. We also want to increase our collective effort on documentation (in connection to Pull Requests - PRs).

On code refactoring, it is expected that the efforts will progressively move from refactoring to evaluation of performances on CPU-GPU platforms (and others). Claude pointed out that there was no plan so far to adapt the codes of DA.

Strategy preparation: overview of content - System & Codes (this slide "system")

the common system will be defined with an increased ambition:
- **development of a common scripting system**, starting from the DEODE scripts.
- **design of a common (collaborative) development environment (CDE).** 2 scenarii have been retained:
  - tools for communication, for documentation and code management
  - toward a common data portal (especially for validation and verification datasets) and/or a common runtime platform for validation/verification (ie a common compute resource)
- the CDE probably will require the careful evaluation of the associated costs (pay-plan solutions, administration support, system management support)

- legal issues might arise for some Members (Procurement issues?)
- balance costs with the possibility to achieve bi- or multilateral agreements between Members, or use in-kind contributions

Regarding system and common development environment (CDE), significant discussions took place during the strategy workshop on the way forward for creating a common scripting system in ACCORD. The proposal is to start from the DEODE scripts which already are known to several ACCORD teams (those involved in DEODE). However, other tools will be considered provided they can help accelerate this work, and provided these tools can be shared across ACCORD.

Claude explained that the CDE proposal contains two levels of ambitions (two scenarii) regarding the design and the implementation of collaborative tools. Legal and policy questions might arise during the design.

Strategy workshop organizational outcome: defining a drafting team

- the whole strategy working week has been extremely intense and took place in a very constructive spirit
- the participants have expressed their strong motivation to remain actively involved in the process of drafting the strategy document
- the proposal by the PM therefore is to form a drafting team to work on the comments from STAC

Claude then moved to the organizational aspects regarding the STAC analysis of the draft strategy proposal.

Claude reminded that during the strategy workshop week, the participants had been very involved in the discussions, summarizing the outcome of the TTs, confronting their opinions and finding compromises (and/or making opportunity/risk analyses). This high-level of involvement probably explains much of the sense of ownership expressed by the participants on the final day, and their strong motivation to continue to work on the document.

Beside forming a drafting team with the volunteering people from the workshop, Claude proposed STAC a detailed procedure and guidelines for analyzing/reviewing the draft strategy paper (the next two slides below). Claude kindly insisted that STAC members evaluate this procedure in terms of both the steps and the timing, during this meeting today.

Regarding the document itself, some last tidying-up work remains to be done (finalize the header section, draft an executive summary, harmonize the use of abbreviations and acronyms). This work is currently performed by a small group of people (the "harmonizing team") before proposing the first draft version to STAC members. This "version 1" is expected to be ready at the beginning of next week. Claude explained that the several sections have their own writing style (due to the several main editors), and this level of heterogeneity is considered as part of the integrity of the content of the document (ie the "harmonizing team" does not intend to reformulate text except for obvious reasons of clarity, misspelling or lack of an explanation).

Strategy reviewing by STAC: proposed procedure (this slide: only a synthetic view)

- 5 June: discuss the organization of the next steps of the strategy preparation (incl analysis and reviewing); discuss the suggested reviewing guidelines; exchange on consultation within each family (as felt relevant)
- the draft strategy document requires some harmonization of editing => the doc is

> expected to be ready by 10 June ("version 1")
> - analysis/reviewing by STAC until the end of August => all feedback by STAC members is made available to the others by 26 August
> - STAC 5 September: discuss comments (and any other recommendation) for the drafting team; discuss any (early) recommendation for Bureau/Assembly
> - the drafting team will work on "version 2", based on the comments by STAC, until the beginning of October. This version submitted to STAC for its meeting on 6-7 Nov
> - STAC 6-7 November: recommendations for the Assembly
> - the draft strategy document is submitted to the Assembly for its meeting on 9 December

Strategy reviewing by STAC: reviewing guidelines

> By thematic section.
> - Are the goals clearly explained
> - How do you evaluate the relevance of these goals for ACCORD
> - When milestones are suggested, do you agree with their importance toward reaching the goal they are associated with
> - When some specific opportunity versus risk analysis is provided, do you have comments on it (do you agree, do you disagree)
> - Do you see any such opportunity/risk analysis missing for some goals
> - Do you have any other comment in the section of interest, including but not limited to resources and their adequacy with respect to the goals, any possible impact on the organisation of the consortium, policy aspects
>
> Header section.
> - Is the header section giving an appropriate general understanding of what ACCORD's general goal and scope is.
> - Are the different subsections in the header addressing the relevant aspects of the surrounding context of ACCORD. Do they provide the relevant analysis?
> - Is the executive summary clear? Does it summarise the main elements of the draft strategy in an appropriate manner?
>
> On the general content of the strategy draft document.
> - When they are explained, are the transversal links across the main sections (thematics) of the strategy relevant. Are there some such links missing, which should be better stated.
> - Do you have any comment on the balance between the various sections (thematics) in the strategy document, in terms of goals and ambitions.
>
> Do you have any other comments ? (free comments section)
> - On the scientific and technical content
> - On the form of the document

In order to facilitate the reviewing work, the collecting of the feedback from STAC and the further processing of this feedback in the 5 September STAC meeting, Claude suggested STAC a few reviewing guidelines. While a number of STAC members certainly are used to working on strategy documents and are aware of such procedures, STAC is composed of people with various

backgrounds, thus sharing those guidelines may help organise the whole process.

Strategy reviewing by STAC: consultation with the family members

- STAC members are invited to explain in a few words, and as they feel relevant, how they will organize the consultation in their family
- for ALADIN-MoU5 STAC members: the PM and the CSS remain available for them, to help organizing the consultation

Saji opened the floor by explaining that the STAC discussion should focus on the procedure.

Christoph: concerning the procedure first (another question on the overview - see below).
1. How about the composition of the drafting team ?

Claude: the composition of the drafting team is not firmly defined yet. Not all of the strategy participants might be volunteering to continue in the team, or some might have constraints for the autumn. We will contact them, explain to them the procedure and assess who will/can join. We will then have to discuss how we organize ourselves inside the drafting team (we had main editors during the workshop for instance).

Christoph:
2. for LACE and the timeline. Fine with the guidelines. There is a LACE steering committee mi-september, but this timing does not suit the planning proposed here. It will be a challenge to get organized and communicate during the summer and besides the steering committee usual planning.

Saji: Summer is a challenging period. In HIRLAM we will have extra meetings just for the strategy.

Christoph: can we send more comments from the LACE side after the STAC 5 September meeting ?

Claude: Quite afraid that if we (STAC and/or the drafting team) get new comments after the 5th of september, it will add confusion as to what actually we should do regarding the updates and how to answer the STAC comments. The idea behind the proposed procedure is that the drafting team gets a single set of comments and recommendations from STAC in the beginning of September, with which it can work to make "version 2".

Christoph: Agreed. We will then also have to organize ourselves in LACE to match the proposed timeline for the ACCORD strategy review steps.

Sami: confirms that HIRLAM has already had discussions about the challenging timeline during the summer.
I was really happy nevertheless to see the first draft overview. I'm glad to see some focus on the common environment.
But what about the infrastructure for it?

Claude: in the document there are references about ECMWF and the European Weather Cloud.
At ECMWF, one could think of organizing/triggering more Special projects in an ACCORD coordinated manner for instance? This could perhaps work provided the one or other ACCORD member takes the action to set it up, to organise it with the interested partners.
At least, we should explore these possibilities on which we already have some expertise across Members.

Yelis: Comment on the consultation process for Aladin-MoU5 partners. I appreciate the proposal for help from the PM and CSS.
Specific question on the overview: Türkiye is not in DEODE, could we nevertheless use the scripts ?

Claude: Yes. This was checked with ECMWF during the DEODE discussions, and ECMWF agrees that the scripts belong to the ACCORD background IPRs (we have expertise on scripting design for NWP). This means that ACCORD can use the scripts from DEODE without having to ask for permission, however the full IPR on them remains shared (between ACCORD Members and the EU, formally speaking).

François: The timeline is good for MF.
MQA and system & code are very important and will have to be looked at in detail. Agrees that to develop the CDE will improve productivity. However we have to think very carefully about the choices that we will make as they will have long term consequences. I would advocate for taking an open approach on evaluating solutions, also keep open the possibility to adapt or to develop some new system components if it is felt more relevant for the long-term sustainability of a solution.

Saji: emphasises that, during the review, STAC members also should carefully evaluate whether the goals proposed in the strategy draft match the objectives of the ACCORD NMHSs regarding the performances of their NWP systems.
Also assess whether the draft strategy proposal enables agile strategic planning.

Christoph: Question on the overview. Regarding CDE and the common script system, I'm happy to see that we'll start from DEODE. What does it mean in detail ? Will we take the branch from DEODE and make our own developpement separately, or should it be kept in phase along the time.

Claude: The idea is to do co-development. This offers both opportunities and risks which we tried to draft in the strategy document. So I refer to it.
One risk is that DEODE and ACCORD specific goals diverge at some point and for some reason we do not yet anticipate.

Saji: proposes that we thank the members of the TTs and the workshop participants for their huge work and their constructive collaborative efforts, which they accepted to do on top of their usual duties. Furthermore we should acknowledge the strong motivation and involvement by the strategy workshop participants, and their volunteering for keeping actively involved in the strategy drafting.

Claude thanked the STAC members for the support to the proposed procedure and their questions on the (albeit brief) overview. Confirms that the harmonizing team intends to tidy up the draft strategy document for the beginning of next week. In addition, Claude mentioned that the document currently only is missing an executive summary (he intends to write a draft by next week though).

Reminder on an action out of this discussion: Rafiq, Yelis, Rahma and PM+CSS to keep in touch and organize the STAC consultation with the Aladin-MoU5 family.

Note: message in the chat from Stephen English (ECMWF) to Everyone

I don't need the floor but just comment that the timing of this is good alongside the new ECMWF strategy, with its strong focus on working with Member States, not just delivering to Member States. So this should help with support to ECMWF resources (both HPC and ANEMOI).

4. Link of DEODE work plans with ACCORD

Claude explained that since the start of DEODE, we use to collect the registration of DEODE-funded manpower in the ACCORD CMR, provided the work falls into the scope of ACCORD activities (the reference being basically the RWP). With the redefinition of work packages and tasks for the phase 2 of DEODE, we need to provide updated (yet simple) instructions to the LTMs on which parts of DEODE work are eligible. Claude presented his own cross-analysis between ACCORD and DEODE.

- the aim eventually is to be able to define the DEODE-funded work that can be registered under the ACCORD CMR
- the proposal is to consider, from within the work packages of DEODE phase 2,
    - the full WP10
    - the WP11.1 and WP11.2 components of WP11
- suggested recommendation for STAC:
    - STAC recommends to consider the work performed in the DEODE WP10 and WP11.[1-2] as eligible for registering DEODE-funded manpower in the ACCORD Common Manpower Register

---

Saji: How about the scripting system, is that included in WP9 ?

Claude: There is a task in WP9 about scripting, however WP9 is much about the implementation and operationalisation of the On-demand DT in the DT environment. THis why for now I was not considering parts of WP9.

Saji: However should we not take into consideration that ACCORD will start investigating the DEODE scripts for co-development ?

Claude: Here we likely touch a question of understanding. The "formal" decision to use the DEODE scripts for the ACCORD common scripting will be official once the strategy for phase 2 of ACCORD is approved by the Assembly. However, we indeed can assume that a few people will start looking at them from the ACCORD perspective already this year.

Xiaohua: There also is Quality assurance work in WP9, as well as implementing the codes with single precision and porting CY49T1 on the EuroHPC platforms. These are all tasks related to the ACCORD background IPRs and activity.

Christoph: I fully support what Xiaohua said. The Quality Assurance aspect is a very important work in WP9.

Sami: agrees about what has been said about WP9.

François: It is important to take into account what is now in the ACCORD RWP. Well separate what is now in the RWP (2024) and what will enter only later.
Make sure we still well separate DEODE and ACCORD work.
Then how about other external projects ? Should we not also register them in a separate manner ?

Claude: The general rule for the registration of the CMR manpower is to register the manpower working on ACCORD goals (ie activity in the teams that matches with the RWP WPs and tasks).

We do not separate manpower by funding.

This being said, some local teams have specific local (institute-level) or national rules that forbid them to register manpower twice, i.e. both for an externally funded project and for ACCORD. As we cannot handle any case-specific rule, the general recommendation is that it is left to each LTM to decide what externally funded manpower he/she can register.

For DEODE, because ACCORD provides the NWP codes to DE, the Assembly decided that we should account for DEODE-funded manpower when relevant (however for the time being, this accounting only is for the records, it does not enter the voting rights).

Claude explained that, regarding the points of view expressed by several STAC members, a proposal could be to add WP9.1 and WP9.3 to the eligible DEODE components for the ACCORD CMR.

Saji: Agreed to add 9.1 and 9.3 to the list of recommendations.

Claude: pointed out that in order to trigger a large sharing of the outcomes of these WPs in ACCORD, the DEODE teams should be largely encouraged to communicate on their results. This could be done by sharing the information/ results through the ACCORD Newsletter or by contributions in the ASW. The only caveat could be not to disclose DE-confidential data in such communication.

Saji: no further comments. Suggestion to break for about 20 mns. Saji and Claude will draft the proposal for the recommendation for the Assembly and propose it for review by STAC after the break.

5. Reviewing of recommendations from STAC

STAC recommends to consider the work performed in the DEODE WP9.1, WP9.3, WP10 and WP11.[1-2] as eligible for registering DEODE-funded manpower in the ACCORD Common Manpower Register. The teams working on these WPs are strongly invited to share results from their work across ACCORD by contributions to the Newsletter or to the ASW, provided no (DE-)confidential information is disclosed.

The above recommendation is agreed by STAC.

6. Update on renewal of STAC membership

Claude reminded STAC members that their mandate is for two years, renewable. Thus we need to check with all members whether they continue in STAC (or not), and this decision should be coordinated within the families. Given that MoU1 finishes at the end of 2025, the membership actually only is for one additional year (2025). Then the Committees will have to be recomposed (at least formally) again for MoU2.

Sami: This was discussed in the HIRLAM Council last week. Saji, Sami continue. Xiaohua will step back and will be replaced by Javier Calvo from AEMET.

Christoph: It will be discussed in the LACE Steering Committee (mid-september). The decision will be finally approved at the end of the year in the LACE Council.
Christoph expects that some LACE members would be renewed.

Rafiq: I'm planning to step down but I haven't informed my family yet. I will confirm my decision in November.
Claude: Please confirm as soon as possible so that I will have some time to look for a new Aladin-MoU5 representative..

Rahma: for 2025 I have to discuss with the PM.

Christine: I would like to withdraw.
Claude: Your replacement will have to be discussed in MF, with the relevant management. I'm ready to join this discussion, if this is useful.

Alain: Indeed, internal discussion is needed. Deadline in the autumn is noted.

Yelis: wish to continue confirmed by mail 29/05/24

Action on Claude: to stay in contact with Rahma and Rafiq.

7.Dates and place of next STAC meetings

- The current decisions regarding the next STAC meetings, until the end of 2024, are:
    - STAC-8: 5 September online 10-13 CEST
    - The meeting link will be
https://meteo.webex.com/meteo/j.php?MTID=mbdea1b4689d6958d6d74d3f4de68e7c3
    - STAC-9: 6-7 November in-person and hybrid (in-person participation is largely preferred). The place has not yet been decided
    - Discuss the place of the 6-7 November meeting
- STAC meetings in 2025 have not yet been discussed. At least two regular STAC meetings, one end of May/beginning of June and one end of October/beginning of November, will take place.

Steve informed STAC that he won't be available for the 6-7 November meeting. He suggests Peter Dueben (modelling, link with AI) or Michael Sleigh (IFS, code and system) to replace him as observer.
Claude: Thanks Steve for the proposal. Indeed each of them would be valuable.
Action on Steve: will check who is available on these dates and let Claude and Saji know.

Saji asks STAC members whether they wish to make a proposal for hosting. No on-the-spot proposal.
To Claude: when should we know about the location ?
Claude: for organisational reasons and in order to be able to provide both dates and place at the upcoming Assembly (3 July), the location has to be decided before the summer break.
Claude suggests giving STAC members another week to check and provide their answer before next Wednesday (ie before 12 June) ?

Saji: OK, we'll leave for another week.

==@Claude and @Saji to discuss the location of the 6-7 Nov STAC meeting next Wednesday according to the answers.==

8. A.O.B.

Christine reported about the outcome of the last SURFEX Steering Committee (SSC) regarding the synchronization of the SURFEX code versions between the main repository managed by the SURFEX community (in MF) and the NWP version currently available in the "IAL" repository for CY49T1 (this recent version is common to all 3 CSCs). She pointed out that the SSC expressed the pressing need for ACCORD to strengthen the synchronization work from the IAL toward the SURFEX repository (aka "phasing") otherwise there could be a serious risk of code divergence.

Claude: confirmed that this point already had been added on the agenda of the ACCORD/MG by the Surface Area Leader (Patrick, for the meeting on Friday 31/05). There will be a joint work next week in Toulouse (Patrick and Adrien), however in MG we are considering how to further strengthen this effort. The MG will continue to take this aspect up in its next meetings. There was no precise action taken yet. We will try to well understand in which parts of SURFEX the phasing difficulties are, and assess staffing.

Claude thanked Christine for having brought this point up in STAC. It is important that concrete issues on the evolution of the codes can be notified in the Committee as the common codes are at the heart of our activity.

9. Closing

Saji thanked the STAC participants for the good discussions and engagement.
He wished the participants a nice summer break and reminded them of the 5 September meeting to discuss the strategy.