Meeting of the Steering Committee for the IO-EUROfusion Collaboration on IMAS #2022.12

09 November 2022

Meeting website: https://indico.euro-fusion.org/e/imas12

MINUTES

Participants

Steering Committee Members
- Alberto Loarte (Head, IO Science Division)
- Volker Naulin (Head, EUROfusion Fusion Science Department)

Additional attendees
- Hartmut Zohm (Head, Plasma System Division, EUROfusion Fusion Technology Department)
- Gloria Falchetto (EUROfusion Preparation for ITER Operation project)
- Pär Strand (Former Acting Project Leader, EUROfusion Code Development for Integrated Modelling project as of July 2020)
- Richard Kamendje, (Steering Committee Secretary, EUROfusion)
- Denis Kalupin (Responsible Officer, EUROfusion Advanced Computing project)
- Simon Pinches (Section Leader, IO Plasma Modelling & Analysis Section)
- Olivier Hoenen (IO Plasma Modelling & Analysis Section)
- Xavier Litaudon (EUROfusion Preparation for ITER Operation WP)

Agenda

start	duration	Item
15:00	2'	0. **Opening and welcome (A. Loarte)**
15:02	1'	1. **Approval of the Agenda**
15:03	10'	2. **Approval of the Minutes of previous meeting and review of open actions**
15:13	20'	3. **WPPrIO: IMAS activities for AWP23 (X. Litaudon)**
15:33	10'	4. **Framework License Agreement**
15:43	16:03	5. **Support to the Administrative Arrangement**
16:03	5'	6. **Any other Business**
16:08	5'	7. **Record of Decisions and Actions**

Summary of the discussions

0. Alberto Loarte (AL) opens the meeting and welcomes all participants.

1. The agenda of the meeting is approved.

2. The minutes of the previous meeting are approved. Action 1, 2 and 3 are closed. With regard to Action 3, it is noted that IO will attempt to adapt SOLPS-ITER itself. AL mentions that IMAS collaboration agreement can now be established with all ITER member institutions.

3. Gloria Falchetto (GL) presents the set of IMAS-related activities to be implemented in the 2023 WPPrIO work programme (see slides). These are cast mainly under two sub-projects:
   - SP-2: Preparation of ITER first experimental campaigns
   - SP-5: Neutronics, Nuclear waste and Safety

   With regard to SP-2 the work started in 2022 on Validated Breakdown/Burn-through tools for ITER first operation will be continued in 2023 with TSVV11. This will include in particular
   - Parameter scan of ITER Ohmic plasma initiation with the full electromagnetic DYON, ECH pre-ionization model
   - Parameter scan (neutral pressure, EC power, impurities) for ITER first plasma operation start-up using tight coupling scheme between kinetic models (BKD0), ECRH absorption (GRAY), and CREATE-BD magnetic models (adapted to IMAS).

   These activities will serve to achieve the milestone on models for plasma burn-through and breakdown adapted to ITER conditions that is due by December 2023. Further work will also be done on the development of IR temperature synthetic diagnostic for off-line analysis and ITER real-time application & ITER wall monitoring system (with TE, W7X). This will include in particular a workplan for implementation into IMAS and input data adaptation. Also, the synthetic diagnostic for the Fibre Optics Current Sensor in IMAS will be finalized and the FILD synthetic diagnostics and simulation in support to FILD design will be extended with the addition of an IMAS interface. All these tools are planned to be ready for ITER first operation. Multi-machines workflow for multi-machines disruption analysis will also be continued with the first release of the EUROfusion JET ILW Disruption Database (4000 pulses) on the Gateway early 2023 and the expansion to other facilities. Finally, work will also continue on Multi-machines EUROfusion databases (pedestal, disruption, confinement) towards achieving the milestone defined as "at least one multi-machine database on the EUROfusion Gateway for exploitation" by July 2023.

   With regard to SP-5, the work toward the standardization of the plasma->kinematics->neutron transport code workflow will focus on making it embedded within the IMAS framework.

AL and Pär Strand (PS) enquire about the backward compatibility that remains an issue. It is agreed that a meeting should be organized in line with Action 1 of the previous meeting.

4. Regarding the Framework License Agreement now in place between the EC and IO, Richard Kamendje (RK) reports that the EC is currently drafting a sublicense to all EUROfusion Beneficiaries and Affiliated Entities that shall be presented and discussed at the meeting of the EUROfusion General Assembly in December 2022.

5. PS reports that the support to the Administrative Arrangement should in principle be provided through the TSVVs and ACHs structure. He notes, however, that most resources are fully booked. In particular AMNS was lacking support and this needs to be looked into as this is currently kept afloat. The data management plan implementation within EUROfusion foresees the use of IMAS in the context of the Administrative Arrangement.

6. Simon Pinches (SP) reports on IMAS Intellectual Property and Licensing (see slides) and mentions that IMAS Generated Intellectual Property is now recorded in the IO IP registry. Components affected include
   - Data Dictionary
   - DivGEO
   - Fundamental Constants
   - IMAS EasyConfigs
   - IMAS Installer
   - IMASPy
   - iWrap
   - MSCL
   - SimDB
   - SimDB Dashboard
   - SOLPS GUI
   - TIARA
   - WALLY

   He also mentions that IO is preparing to ask the ITER Council for permission to release IO's IMAS GIP as Open Source but this only makes sense if the EU will also allow EU background IP (BIP) to be released under an open source license. He then proposes EUROfusion to establish that EU BIP can be released as open source.

7. The next meeting is agreed to take place on 03 April 2023 at 15:30.

8. Review of decisions and actions

The new actions agreed are as follows:

1. Simon to produce a table listing the categories of codes (physics, control, ...) available in the EU and of interest to IO that will be used to assess if the currently available licenses would allow IO to have access to future developments.

2. Simon to provide a list of components of the IMAS infrastructure from the EU that should be part of the package to be released as open source.