

## Summary of the ITM-TF kick-off meeting of the EDRG group held on 30/01/2009

### Participants:

Rui Coelho, Frédéric Imbeaux, Jaqueline Signoret, Olivier Sauter, Tommaso Bolzonella, Christian Konz, David Coster, Christoph Fuchs, Rainer Fisher, Garrard Conway

### Agenda

- 1 - General overview of the EDRG-09 activities and call response.
- 2 - Opportunities for V&V.
- 3 - Present status of the MD and work ahead (revisions, extensions,...).
- 4 - Discussion on the Control activities within ITM
- 5 - Opportunities for diagnostic synthetization.

### OPPORTUNITIES FOR V&V

From initial conversations with representatives from JET, opportunities on a 1-2yr time scale in the areas of equilibrium reconstruction + linear MHD stability (IMP1) and the European Transport Solver (IMP3) have emerged. The contact persons (EDRG-T1) are called for contact with the Project Leaders (initially IMP1 and IMP3, where fully integrated tools already exist) to agree on strategies for implementing a V&V workprogramme.

In parallel, it was identified during the meeting the need for experimental data....move to MD and data mapping discussion

### MACHINE DESCRIPTIONS

1. I sent an email to the EDRG-T2 contributors plus some past contributors and directly affected people (Paddy McCarthy, Christian Konz, W.Zwingmann) with the present MD of MAST,JET,AUG,TS. As Frederic has mentioned in an email, we have official MD for TS, MAST and non-official and incomplete (more severe AUG) JET and AUG. TCV is always "thinking about it". I don't know if their are so eager to embrace it.
2. There is now consensus (apparently) that the hybrid format for the MD (closer to what IMP1 used last year) will become the standard. This discussions will become futile once the full MD+exp data package is compiled and the CPO tree stored in the ITM db.
3. We will proceed with the revision of the present set of MD since there are issues with AUG for instance on some magnetics and on the MSE CPO. Regarding the later, i'll contact directly Paddy to urge him to write down with Christoph Fuchs and Tilmann Lunt (the new T2 people) exactly what is wrong with the present MD and their needs.
4. Zwingmann doesn't have a tool to convert the XML files to ITM database entries so Frederic will aid him on having database entries for other shots/devices. Here it is really up to Frederic to move since once the ITM database entries are set everybody will have access to the

CPOs.

The exp2ITM tool is an important player since it completes the CPO tree with the experimental data. Frederic expects to have within 2-3 weeks a functional exp2ITM package so that everybody may start using it.....but.....

#### DATA ACCESSING

5. We have all agreed that we need asap experimental data from the devices.....don't care if it is validated or not.....only for testing purposes ! May we do it "on our own" is the issue.....Christian knows some reference AUG pulses and we may move ahead.....but the AUG MD needs to be finished.

6. I explicitly mentioned that there are ongoing discussions, i mentioned the JET case as an example but there are (will be) others. The contact persons (T1) should assist on that....but there was none today attending the meeting.

7. About V&V collaborations, i mentioned the ongoing discussion with JET. Said that equilibrium and linear MHD stability were identified as short term goals since the ITM tools there are the most developed ones.....Christian had no idea about it. I thought Guido would have talked to him....SHOULDN'T I HAVE MENTIONED it.....

8. I asked David if he would think the same sketch proposed to JET could be proposed to other experiments and he agrees it is generic enough to be adapted to others.

9. We found it is too early to discuss on validation. It is necessary to find the RO from each device who will render available the validated data and discuss WHAT is validated data with ITM peers. From the technical point of view, the exp2ITM package is fully ready for MDS+ retrieval and for the moment reads the latest entry to the remote database (latest PPF at JET).

10. We can have multiple versions of the MD file since each shot range will correspond to a given RUN in the SHOT=0 (#100-199 Run=1,#200-299 Run=2, ...). However, the answer is not so easy when i asked Frederic about same shot number but different versions of the same exp. data. If we use our codes with a given exp.JET data.....and then JET realises the data needs re-processing.....what do we do ? Either we can use a different OCCURENCE number for that CPO (but Frederic thinks it complicates exp2ITM) or we use a relational database that tells exp2ITM which data to fetch.

#### SYNTHETIC DIAGNOSTICS

11. Rainer Fischer left before i had time to ask about the opportunities for diagnostic synthetization and Manfred did not attend the meeting. I will contact both separately.....

#### CONTROL ACTIVITIES

12. I told Tommaso Bolzonella to contact Guido and IMP2-T2b contributors to get acquainted with the control issues and start assessing needs for updating the MD and modules available....and connection to the KEPLER control toolbox.

#### FINAL REMARKS

13. Olivier Sauter confirms that DINA-CH can be ported to the Gateway but the MATLAB stays. He wants the MATLAB API ready so that they can import our CPO structure and use their own code as is. Same thing holds for synthetic diagnostic they might provide. There might be a PhD student but....not MATLAB interface no code....

