



Characterization Cluster meeting In Limerick

Limerick, Ireland 21.10.2015

Analog Devices Building, University of Limerick ADB-1046

Meeting minutes

Contributors:

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List of attendees:

Costas Charitidis	PTA
Tofail Syed	University of Limerick
Marco Sebastiani	Roma TRE university
Antonio Nigro	G.N.R.
Nagavalli S. Kiran	Tescan BRNO
Stefan Weigel	RIKILT, NL

Interactions with the European Materials Modelling Council (EMMC)

Further alignment with the European Materials Modelling Council (EMMC) has been decided. Marco Sebastiani will collect information from the EMMC structure, and prepare a document with a summary of it. This should be done **by End of November 2015**. Final aim of this will be to arrive in a short time to publish a document with scope and organisational structure, using "best practices" from EMMC.

Interactions with NanoSafety Cluster (NSC)

It is agreed that WG3 of ECTT should be deeply connected with the NSC. For this reason, the coordination of WG3 is assigned to **Stefan Weigel**. It is agreed that the interactions between NSC and ECTC will be also promoted by mutual participations to meetings. It was agreed that the characterisation cluster should create a WG on the establishment of an US-EU community of research (<http://us-eu.org>)

Organizational issues

"Open group" with strong representation of a broad spectrum of industry (such as metallurgy, transport, energy, equipment, standardisation bodies, ...) should be created. To do so, the WG4 leaders should act, in cooperation with the other WG leaders, to get third companies involved in the cluster. Marco Sebastiani will adapt NSC and EMMC forms to the ECTC case.

An **Operational Management Board (OMB)** will be established, with the following role:

- Leadership, coordination and main operations of the EMCC
- Advisory board (for ECTC working groups)
- Provide advice to EC for H2020



- Increasing awareness on ECTC activities in broad materials characterisation community (networking activity)
- Organisation of ECTC Meetings

"Council or Cluster"? How to learn from EMMC to build the EMCC

A new European Materials Characterisation Council (EMCC) will be established shortly, being its main structure mirrored from the European Materials modelling Council (EMMC).

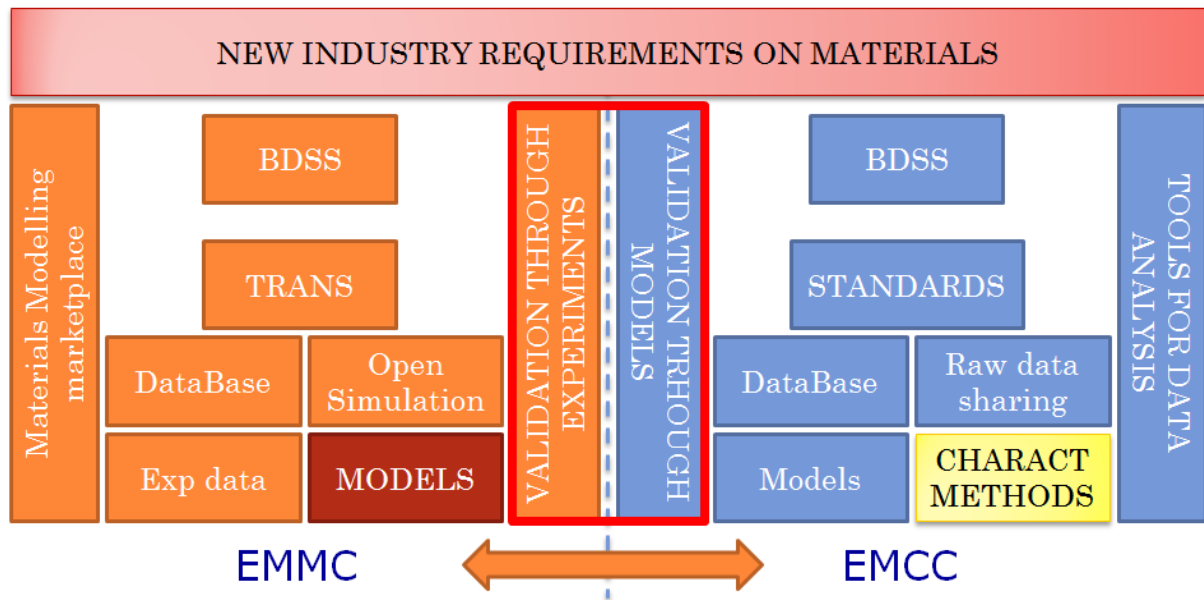
According to this concept, here is a preliminary list of the required actions:

1. The EMCC will have the main purpose of establishing an organised European characterisation community (open to everybody and bottom-up driven) that represents all stakeholders in the field;
2. The *main EMCC objectives* will be similar as the EMMC:
 - a. Wide stakeholder consultation
 - b. Stimulate complementary activities to what already exists
 - c. Stimulate exploitation of existing materials characterization expertise
 - d. Stimulate new experimental methods development necessary for industrial applications
 - e. Provide inputs for EC future visions/plans;
3. An *EMCC Industrial Advisory Board* will be established as well;
4. The *EMCC stakeholders* will be as follows:
 - a. Materials Manufacturers (industrial end-users of characterisation tools)
 - b. Manufactures of analytical instruments (both academic and industry)
 - c. Standardisation Bodies and Metrology institutes
 - d. Materials Scientists divided into sub-groups according to the main specific expertise (e.g. AFM, micro/nano-mechanical, diffraction, optical techniques, etc...). More working sub-groups will be probably required to fulfil this target;
5. *Operational team Managers (OTM)* for each working group will be nominated;
6. An *operational management board (OMB)* will be nominated as well
7. Business Decision Support (*BDSS*) workgroup will be established as well;
8. An EMCC "*Roadmap for Materials Characterisation*" document will be prepared and released (as a first draft) at the kick-off meeting;
9. A member Wiki page for exchange of knowledge-data-opinions-resources will be created for EMCC as well;
10. Similar activities for Materials Characterisation Metadata structure creation, raw-data



sharing and ethical issues in data publishing will be established;

The *mirrored EMMC/EMCC structure* is reported in the following cartoon:



Raw Data sharing scheme and implementation

Marco Sebastiani, as editor of an Elsevier Journal, reports on the possibilities given by publishers on Raw Data sharing, Metadata publication and related ethical issues.

In particular, Elsevier have just launched an online JOURNAL, called "Data in Brief", through which an author can publish the DATA related to specific experiments and/or models. They also told me that several journals are already linked to this journal, meaning that an author can publish a scientific paper (e.g. In ActaMaterialia, Materials&Designetc) AND a linked document (in "Data in Brief") with the raw data.

Here are links for more information:

<http://www.journals.elsevier.com/data-in-brief/>

<http://www.elsevier.com/connect/new-data-journal-lets-researchers-share-their-data-open-access>

Similar possibilities are given by other publishers, e.g.:

<http://www.nature.com/sdata/>

This activity should be developed in CLOSE relation with the EMMC, where a very similar project is on-going regarding MetaData for materials modelling.

For such reasons, Marco Sebastiani will attend the next meeting on metadata organised by



EMMC and prepare a report for the ECTC:

<http://emmc.info/eu-workshop-on-metadata-and-interoperability/>

<http://emmc.info/material-modelling-metadata/>

Changes in ECTC website

Working Group 3 “Regulation, toxicology and safety” by the leadership of Dr. Stefan Weigel, will be added in the ECTC structure.

More projects will be added in the list of projects.

The list of meetings will be updated and links for the minutes and agenda for each meeting will be provided.

Next Actions

- Foundation of the European Materials Characterisation Council (EMCC). Preparation by OMB in alignment with EC and EMMC. **To be done by June 2016.**
- Preparation of letters of express of interest for inclusion in ECTC of new partners (projects) (further to those who already participated). Preparation of Project and Task breakdown forms for apply. **PTA: See attached files.**
- Preparation of 3 (?) types of surveys for SMEs, Industries and Academia/Research centers. **Limerick, NTUA and PTA will do it.**
- Recommend priority areas where specific metrology research topics should be funded. Suggestions from each of the **Steering Committee members** should come to PTA by the end of November.
- Recommend building of impact on metrology within appropriate EC research topics. Build-up Metrology and Instrumentation Roadmap for European Industry (by December 2015).
Tofail Syed, Jordi Fraxedas, Stefan Weigel, Marco Sebastiani will contribute.
- Researcher Business model creation - benefit from DOI endless validity. Databases (and people that will benefit from) identification.

Chris Eberl & Marco Sebastiani will contribute

- Quality Control System (QCS), Standard Operating Procedures (SOPs), Data Digitization (level of compression), Automization Process.
Antonio Nigro/Tofail Syed will work together on this TESCAN and GNR will



report on their internal procedures by the end of the year.

- Publication of Position and Discussion papers (Strategic documents), together with formation of Research and Stakeholders Steering Committees and contact with Standardization bodies.
Adriela Prina-Mellowill contribute

Next meetings – Kick-off of the EMCC

Holding a 3rd Meeting of the Materials Characterisation Cluster in 2016 and kick-off of the EMCC. Options are:

1st half 2016, either in Brussels as separate event or in combination with other events such as:

- 11th Seminar on Quantitative Microscopy and 7th Seminar on Nanoscale Calibration Standards and Methods - Wroclaw, Poland, 9-11 March 2016.
- NanoFair 2016 and 4th Dresden Nanoanalysis Symposium, Germany, 14-16 June 2016.
- Industrial Technologies 2016, 22-24 June 2016, Netherlands.

The last of the four options (Industrial Technologies 2016, 22-24 June 2016, Netherlands) is selected as the **most suitable** for such an event.



Characterization Cluster meeting Agenda

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**Wednesday 21th October 2015
Start Time 10:30**

13.45	Welcome	Tofail Syed
13.45-14.15	Raw Data sharing scheme and implementation	Marco Sebastiani
14.15-15.45	Implementation plan of the action items agreed in Riga	Costas Charitidis / All
15.45-16.00	Plan for next action/meeting	Costas/Marco
16.00-18.00 MDT	Tour of characterisation facility and LANIR prototypes at MSSSI and NT-MDT	
19.30	Networking Dinner along with attendees of LANIR meeting, Round table discussants and NanoNet Ireland delegates (national and international) on Characterisation clusters.	

