

An experimentally-validated multi-scale materials, process and device modelling & design platform enabling non-expert access to open innovation in the Organic and Large Area Electronics Industry (MUSICODE)

Grand Agreement: 953187

Project Start Date: 01/01/2021

Project Duration: 48 months

Deliverable 3.7

Report on the population and completeness of databases

Date: 20-01-2024



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under the Call DT-NMBP-11-2020 "Open Innovation Platform for Materials Modelling"

Project co-funded by the European Commission within Horizon 2020 Research and Innovation Programme			
Dissemination Level			
PU	Public		
PP	Restricted to other programme participants (including the Commission Service)		
RE	Restricted to a group specified by the consortium (including the Commission Services)		
СО	Confidential, only for members of the consortium (excluding the Commission Services)	х	

Deliverable author(s): Dimitar Kutsarov (USUR) and Davide Di Stefano (ANSYS)

Contributors:

Name Organization
D. Kutsarov, R. Silva SURREY
A. Paliagkas, E. Doudis, A. Laskarakis AUTh
M. Andrea, K. Kaklamanis, K. Kordos, E. Lidorikis Uol
S. Jenatsch Fluxim
V. Kyriazopoulos OET

Draft Revisions: v0.1 distributed by coordinator on 24/11/2023.

v1.0 submitted on 12/01/2024.

v2.0 finalized by coordinator on 20/01/2024.

Copyright

@ Copyright 2021-2024 The MUSICODE Consortium

Consisting of Coordinator: University of Ioannina (UoI) Greece
Partners: Karlsruhe Institute of Technology (KIT) Germany

University of Surrey (SURREY)

Aristotle University of Thessaloniki (AUTh)

Czech Technical University in Prague (CVUT)

Fluxim AG (FLUXIM)

UK

Czechia

Switzerland

TinniT Technologies GmbH (TINNIT)

ANSYS UK (ANSYS)

Esteco SPA (ESTECO)

Organic Electronic Technologies (OET)

Germany

UK

Italy

Greece

AIXTRON (AIXTRON) Germany

This document may not be copied, reproduced, or modified in whole or in part for any purpose without written permission from the MUSICODE Consortium. In addition to such written permission to copy, reproduce, or modify this document in whole or part, an acknowledgment of the authors of the document and all applicable portions of the copyright notice must be clearly referenced.

All Rights reserved.



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under the Call DT-NMBP-11-2020 "Open Innovation Platform for Materials Modelling"

"The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."

Contents

Publishable summary	4
1. Introduction	5
1.1 Objectives of WP/Task	5
1.2 Purpose of this Document	5
2. Format of characterization data	6
2.1 Material data: Layers	ε
2.2 Device data: Devices	7
3. Database tools	10
3.1 Data schema for Layers	10
3.2 Data schema for Devices	12
3.3 Data schemata for modelling	13
3.4 Data Import tools	17
3.5 Database tools for searching, finding, and comparing records	18
4. Database population	
4.1 Representative Layer and Device Records	20
4.2 Representative Material Modelling Records	21
4.3 Summary of created records.	22
5. Discussion	
5.1 Achievements	24
5.2 Risks	24
5.3 Next steps	24
6. Conclusions	25

Publishable summary

MUSICODE project deliverable 3.7 shows the status of the population and completeness of databases and is part of task 3.4 "Collection of data for database population". This report elaborates the approach chosen by the project partners for collection and import of generated experimental data which allows for a traceable and structured management of the dataset records into the data management system (DMS). Import templates were designed and created and the content of the import templates is explained. Additionally, screen shots of the DMS will are shared and examples of different dataset records are presented and explained. A statistical plot of already created records is also shown to depict the statistical distribution between uploaded records.