

EUCALL

The European Cluster of Advanced Laser Light Sources

Grant Agreement number: 654220

Work package 1 – Management

Deliverable D1.4

2nd EUCALL Annual Meeting

Lead Beneficiary: European XFEL

G. A. Appleby, D. Pahl, T. Tschentscher

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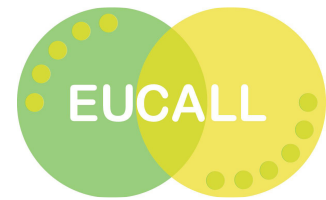
Date of delivery: 28 September 2017

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<i>Deliverable Type</i>	
R = Report DEM = Demonstrator, pilot, prototype, plan designs DEC = Websites, patents filing, press & media actions, videos, etc. OTHER = Software, technical diagram, etc.	OTHER
<i>Dissemination Level</i>	
PU = Public, fully open, e.g. web CO = Confidential, restricted under conditions set out in Model Grant Agreement CI = Classified, information as referred to in Commission Decision 2001/844/EC	PU



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EUCALL Annual Meeting 2017 **07 - 09 June 2017**

Venue: ESRF Auditorium

ESRF, 71 Avenue des Martyrs, 38000 Grenoble, France

The 2nd EUCALL Annual Meeting was held at ESRF, Grenoble during 07-09.06.2017. In total, 64 participants attended the EUCALL Annual Meeting, and the Plenary Session containing presentations introducing EUCALL and its progress to date were attended by all. ESRF's Director of Research opened the meeting while Thomas Tschentscher, the EUCALL Project Director, welcomed the participants with a coordinator report: EUCALL's progress during its first project period. Members of each Work Packages (WPs) 3-7 presented the progress to date of each WP (10min each).

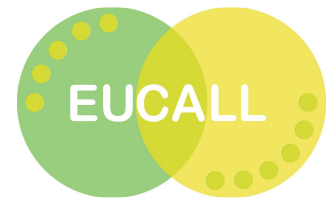
The participants then divided into the first parallel sessions for their separate WPs which involved presentations and discussions about the current status of each of the members. This was followed by a lunch break, and then a poster session, at which 23 posters covering developments from all of WPs3-7 were presented.

The participants divided again into parallel WP sessions to discuss further development of their defined EUCALL tasks and objectives. In place of the WP3 (Synergy) session, the participants held EUCALL's 3rd Face-to-Face Steering Committee meeting. The participants were then divided into small groups for a tour of several of ESRF's experimental facilities, and then reconvened for a poster session and aperitif followed by dinner in the ESRF canteen.

On Thursday 08 June, the participants divided again into parallel WP sessions, during which WP5 (UFDAC) and WP7 (PUCCA) joint for a combined session to discuss UFDAC's support of PUCCA's data handling requirements.

The participants then reconvened for a series of invited presentations on photon beam characteristics and applications at the different types of light source. Harald Reichert (ESRF) presented the properties of diffraction limited storage rings for generating x-rays and their scientific application. Wilfried Wurth (DESY) discussed free-electron laser radiation, with a particular focus on application of beams of coherent UV and x-radiation. Dimitri Batani (Uni. Bordeaux) then described the production and application of x-rays driven by long-pulse lasers. He discussed the advancement in France's "Laser MegaJoule/PETawatt Aquitaine Laser" (LMJ/PETAL) project and the perspectives of using laser-driven x-ray sources for backlighting experiments at laser facilities. Finally, Arie Irman (HZDR) presented the production and application of x-rays driven by short-pulse lasers, with an emphasis on betatron and plasma-wakefield accelerated sources. The meeting participants emphasized that this session was a welcomed overview of the differences and commonalities between





the different types of light source, as these comparisons are not always clear for a typical scientist or engineer working at an individual synchrotron, free-electron laser or optical laser facility.

This plenary session was continued by Thomas Tschentscher, in a presentation about future possibilities to extend EUCALL's activities beyond its present funding period. Possibilities include new proposals for Horizon2020 funding from a subset of EUCALL's partners, a continuation of a EUCALL-like collaboration with the laser community within future synchrotron/FEL cluster initiatives, or the formation of the "EUCALL Network" for regular meetings to discuss possible collaborations and proposals for alternative funding. In the open discussion following, it was unanimously agreed by the participants to continue EUCALL's collaboration in the future. Afterwards all of the participants were transported to the venue of the Meeting Networking Dinner.

On Friday 09 June the participants divided again into parallel WP sessions and then reconvened for the final plenary session, which involved a summary presentation from each of the WPLs, describing what has been achieved over the past three days (10min each) and a final close-out from Thomas Tschentscher, who invited the participants to the 3rd EUCALL Annual Meeting to be held at ELI-Beamlines during summer 2018.

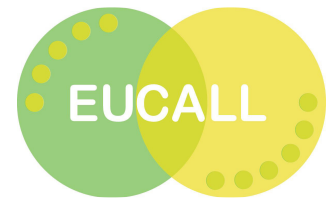
After the official end of the Annual Meeting, a combined meeting of the Synergy Board and Executive Board was held, as well as a separate EUCALL Scientific Advisory Committee (SAC) meeting in parallel. Finally, the SAC members reconvened with the WPLs/WPCs to provide their comments and conclusions about EUCALL's progress since the SAC Meeting 2016.

WP3 – Synergy of Advanced Light Sources:

Introductory session: An overview of WP3's data collection spreadsheet entitled "Instrumentation at ALL-RIs" was presented, as well as plans to incorporate the collected data into the user-accessible www.wayforlight.eu database. The "Survey of Technology Transfer at RIs" was also discussed, as well as initial conclusions which could be drawn. WP3's upcoming experience exchange workshops "User Access at ALL-RIs", "Biology at ALL-RIs" and "Innovation Potential of ALL-RIs" were introduced, as well as the four joint foresight topics "Theory/Simulation/Computing at ALL-RIs", "Building a Targetry Network at High Repetition Rate Laser Facilities", "High Impact Science at ALL-RIs" and the "EUCALL workshop for RI Operators and Policy Makers".

Summary session: It was reported that the WP members had decided to forward the "Instrumentation at ALL-RIs" spreadsheet to selected external experts, for their analysis of missing capabilities and possible synergies. A plan to develop the structure and first drafts of WP3's upcoming deliverable reports during 2017 was also defined.





WP4 – Simulation of Experiments (SIMEX)

Introductory session: A summary of the goals of SIMEX was shown and the workflow structure of the software to date was presented. A table showing all of the different software modules currently incorporated into simex_platform was shown as well as an overview of the github software repository and the User's Manual. An overview of the progress for the upcoming Milestones and Deliverables was presented, as well as the scientific cases which the software has been/is applied to. Finally a plan for the WP4 sessions of the Annual Meeting was shown.

Summary session: It was reported that the SIMEX WP sessions consisted of 19 presentations from the various participants, summarizing the work done by each partner since the last meeting. A breakdown of the work to be performed by each partner for each of the next Milestones and Deliverables was shown. Finally, a concept was presented to demonstrate how SIMEX could be implemented into a multiphysics, multiscale, interactive science laboratory, to be extended beyond the length of the EUCALL project.

WP5 – Ultrafast Data Acquisition (UFDAC)

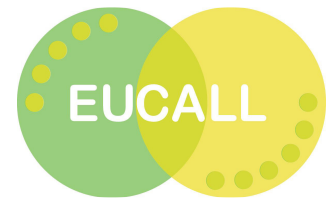
Introductory session: The WPL summarized UFDAC's milestones and the work performed towards completing each of them to date. The FPGA/GPU workshop held at European XFEL in November 2016 was reported with emphasis on the positive reception by the 45 attendees. The contribution of each project partner to the various tasks of UFDAC were presented, as well as the current status of the UFDAC-PUCCA crossover which began in February 2017.

Summary session: The WPC presented status reports and highlights of the latest achievements of the different partners which had been discussed during the WP sessions, including the required next steps needed for UFDAC's remaining Milestone and upcoming Deliverable reports. UFDAC has started planning a second workshop on "Communication technologies and high-speed data transfer" to be held during 2017. The joint UFDAC-PUCCA session was discussed, with a plan established for how the collaboration will proceed. Some ideas and interests for the extension of UFDAC's activities beyond the EUCALL project were also identified.

WP6 – High Repetition Rate Sample Delivery

Introductory session: The WPC outlined how each of EUCALL's RIs require high-repetition rate sample delivery, and reintroduced the objectives and tasks of the WP. It was reported how all of HIREP's Milestones have been completed, and some specifications about the designed sample frame and sample positioning system were presented. A "Software Workshop" held in Prague during January 2017 was reported, and the next steps for HIREP's remaining Deliverables were outlined.





Summary session: The WPC summarized the content of the parallel WP sessions which involved status reports from each of the involved RIs on their work done to date. The most interesting discussion points from the sessions were listed, and a series of three HIREP workshops planned for the rest of the EUCALL project was defined. New possible synergies with UFDAC were also introduced, which will deal with image processing and handling of metadata. The Future of HIREP was also mentioned, within the framework of the European Open Science Cloud, the proposed Targetry Delivery Network (WP3 joint foresight topic) as well as a new collaboration with PUGCA involving liquid sheet systems for sample delivery.

WP7 – Pulse Characterisation and Control

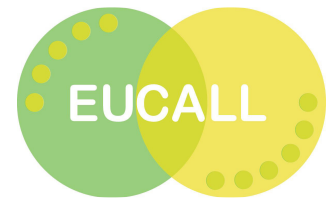
Introductory session: The WPL showed highlights of the work performed to date towards each of the four photon beam diagnostic technologies being developed within PUGCA. Each development has shown considerable progress and prototypes are intended to be tested at the European XFEL in summer 2017. A summary of PUGCA's project Deliverables was provided, as well as a list of WP meetings which have taken place, indicating well-running multi-facility collaboration.

Summary session: The WPL reiterated the successful development of prototypes for each photon diagnostic technology and the plan for testing during the commissioning of the FXE instrument of European XFEL during summer 2017. The UFDAC-PUGCA collaboration was also mentioned, as well as a joint commissioning campaign at ELI-Beamlines. Finally, a discussion was reported to adapt diagnostics tools, especially the intensity monitor, for high power lasers at ELI-NP which is considered a possible project for a future EUCALL network.

Summary

The EUCALL Annual Meeting 2017 was another successful meeting in which significant progress was demonstrated in completion of EUCALL's tasks by all WPs. The reported progress clearly illustrated that EUCALL's linking of the accelerator and laser communities is delivering important new technologies and synergies to the benefit of both. The positive discussion regarding the Future of EUCALL implies that this cross-community exchange will continue into the future.





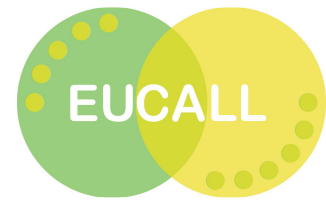
EUCALL Annual Meeting 2017 7 - 9 June 2017

Venue: ESRF Auditorium
ESRF, 71 avenue des Martyrs, 38000 Grenoble, France

Wednesday 7 June 2017

Time	Programme
08:30	Registration and Coffee
09:00	<i>Welcome to ESRF</i> – H. Reichert / Director of Research - ESRF
09:10	<i>Introduction</i> – T. Tschentscher / European XFEL
09:40	<i>Status of WP3 / SYNERGY</i> – F. Canova / ELI-DG
09:50	<i>Status of WP4 / SIMEX</i> – C. Fortmann-Grote / European XFEL
10:00	<i>Status of WP5 / UFDAC</i> – M. Bussmann / HZDR
10:10	<i>Status of WP6 / HIREP</i> – J. Schulz / ELI Beamlines
10:20	<i>Status of WP7 / PUCCA</i> – K. Tiedtke / DESY
10:30	Coffee Break
11:00	<i>Work package meetings: Part 1 - Overview of progress</i> <i>WP3 – SYNERGY</i> <i>WP4 – SIMEX</i> <i>WP5 – UFDAC</i> <i>WP6 – HIREP</i> <i>WP7 – PUCCA</i>
13:00	Lunch at ESRF Canteen
14:00	Poster Session and Coffee
15:00	<i>Work package meetings: Part 2 – Next steps, planning of workshops</i> <i>WP4 – SIMEX</i> <i>WP5 – UFDAC</i> <i>WP6 – HIREP</i> <i>WP7 – PUCCA</i>
15:00	Steering Committee meeting



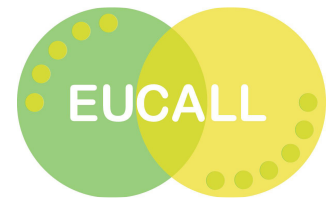


17:00	Site Visit (ESRF beamlines) + Coffee
18:30	Poster session + Aperitif
19:30	Exchange of information during Dinner in the Canteen

Thursday 08 June 2017

Time	Programme
09:00	Work package meetings: Part 3 WP3 – SYNERGY WP4 – SIMEX WP5 – UFDAC & WP7 – PUCCA: common session in Auditorium WP6 – HIREP
11:00	Coffee Break
11:30	<i>Properties of DLSR x-rays + scientific application</i> – H. Reichert / ESRF
12:00	<i>Properties of XFEL x-rays + scientific application</i> – W. Wurth / DESY
12:30	<i>Properties of HPL x-rays + long pulse lasers</i> – D. Batani / Uni. Bordeaux
13:00	Lunch at Canteen
14:00	Free time with optional Site Visits
16:00	Coffee Break
16:30	<i>Properties of HPL x-rays + short pulse lasers</i> – A. Irman / HZDR
17:00	Future of EUCALL - Coordinator Team
17:30	Discussion about Future of EUCALL
18:00	Poster Session
19:00	Bus transfer to Restaurant
19:30	Exchange of information during Meeting Dinner
22:00	Bus transfer to Accommodation





Friday 09 June 2017

Time	Programme
09:00	Work package meetings: Part 4 WP3 – SYNERGY WP4 – SIMEX WP5 – UFDAC WP6 – HIREP WP7 – PUCCA
11:00	Summaries from work package meetings – WP leaders
11:50	Closing Remarks – T. Tschentscher / European XFEL
12:00	End of Meeting

Only for EUCALL Executive Board, Synergy Board and Scientific Advisory Committee (SAC)

Executive Board and Synergy Board Meeting / SAC Meeting

09 June 2017

Venue: ESRF, room BE 1-01 & LOB 1-45

Time	Programme
12:00	Lunch
12:30	Meeting of the EUCALL Executive Board and Synergy Board
12:30	Closed SAC Meeting
13:30	Reconvening of SAC with WPLs

