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Erasmus+ Programme Key Action 2 Cooperation Partnerships for Higher Education (KA220-HED)
Project No: 2023-1-RO01-KA220-HED-000155412
Project title: European Network for Additive Manufacturing in Industrial Design for Ukrainian Context – Acronym: AMAZE

Minutes of Short-term joint staff training event in the field of VR and AR programming

Hosted by: **EDIBON International S.A., Madrid, Spain**
Date: 7-10 May 2024, c/ Julio Cervera 10,
Móstoles Technological Park, 28935, Madrid (Spain)
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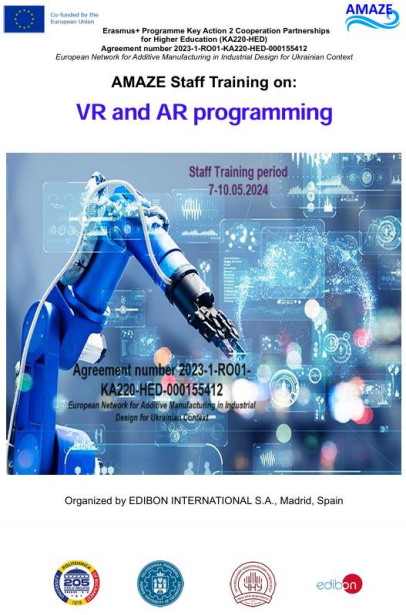
Participants:

At the Short-term joint staff training event, hosted by EDIBON International S.A. company, in the period 7-10 May 2024, on the field of VR and AR programming participated **17 persons,** from consortium partners: National University of Science and Technology POLITEHNICA Bucharest, Romania (UNSTPB), Poznań University of Technology, Poland (PUT), Yuriy Fedkovych Chernivtsi National University, Ukraine (YFCNU) and EDIBON International S.A. Madrid, Spain.



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This event was organized in the frame of the project- Agreement number 2023-1-RO01-KA220-HED-000155412, Acronym: AMAZE with the title "*European Network for Additive Manufacturing in Industrial Design for Ukrainian Context",* Erasmus+ Programme Key Action 2 Cooperation Partnerships for Higher Education (KA220-HED).

The Opening and Welcome ceremony began with an introduction from each partner involved (UNSTPB, PUT, EDIBON International S.A., YFCNU), followed by different courses based on the meeting agenda. The participants completed the initial test.

National University of Science and Technology POLITEHNICA Bucharest, Romania (UNSTPB) was represented by AMAZE project coordinator Mrs. Assoc.Prof. Diana Băilă, Mr. Prof. Nicolae Ionescu, Mr. Prof. Dumitrescu Andrei and Mr. Prof. Zaharia Cătălin, that presented next courses: Additive Manufacturing used in industrial design of complex parts, new materials used in industrial design – sensors and electronics, exploring polymeric materials: innovations and uses in 3D Printing, Modelling and Simulation using Enterprise Dynamics – laboratory, Architectural design CAD in industrial products.

EDIBON International S.A. company presented us AR/VR applications realized for industrial equipment's for different laboratories on-line, using virtual platform (ARISE software), that were used in COVID period by the Spanish universities and research centers, that were sustained by Mrs. Bonilla Mirian and Mr. Carlos Lleras Carli.

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Agenda for Staff training in VR and AR programming EDIBON INTERNATIONAL S.A. Company, Madrid, Spain 7-10.5.2024

Date and time period	7.05.2024	8.05.2024	9.05.2024	10.05.2024
8.30 - 8.45 AM	Registration of the participants	EDIBON International S.A. visit (manufacturing and assembling rooms / facilities)	EDIBON INTERNATIONAL S.A. Company (manufacturing of AR / VR rooms and testing of the facilities in the rooms)	AMAZE platform (basic concept, vision, organizing into different rooms) - lecture
8.45 - 9.00 AM	Introduction – welcome words+ presentation of training scope			
9.00 - 9.45 AM	Additive manufacturing used in industrial design of complex parts (Assoc.Prof. Băilă Diana – Politehnica Bucharest)			Research realized concerning materials used in industry (Prof. Adam Patalas, Prof. Pawel Zawadzki – PUT)
9.45 - 10.30 AM	AR/VR software presentation (EDIBON)	VR presentation (basic concepts) – lecture (EDIBON)	AR presentation (basic concepts) – lecture (EDIBON)	AMAZE application – laboratory – uploading the rooms / VR & AR apps on the virtual platform
10.30 - 11.00 AM	Coffee break	Coffee break	Coffee break	Coffee break
11.00 - 12.15 PM	AR/VR applications – laboratory work	Reverse Engineering (As.Prof. Natalia Wierzbicka, Prof. Remigiusz Labudzki – PUT)	Exploring Polymeric Materials: Innovations and Uses in 3D Printing (Prof. Zaharia Cătălin-Politehnica Bucharest)	AMAZE application – laboratory – releasing of the draft variant of AMAZE platform on the AMAZE website
12.15 - 13.00 PM	New materials used in Industrial Design. Sensors and electronics. (Assoc.Prof. Băilă Diana – Politehnica Bucharest)	Design Methods (Prof. Dumitrescu Andrei – Politehnica Bucharest)	New materials and properties used in architectural design (YFCNU Ukraine)	Testing of AMAZE platform and final feedbacks related to the functionality and content of the platform, next steps about what has to be improved
13.00 – 14.00 PM	Precision and dimensional control used in industry (Prof. Ionescu Nicolae – Politehnica Bucharest)	Architectural design CAD in industrial products (YFCNU Ukraine)	Conclusions, feedbacks and interim evaluation of progress work	Closing words, releasing of the certificates, final conclusions related to realizing training and future work and closing ceremony
14.00 – 15.00 PM	Lunch break	Lunch break	Lunch break	Lunch break

The Yuriy Fedkovych Chernivtsi National University, Ukraine (YFCNU), represented by Mrs. Prof. Mariana Borcha, Mr. Prof. Igor Fodchuk, Mr. Prof. Yuriy Sobko and Mrs. Prof. Tetiana Antoshchuk presented the steps necessary for CAD/CAE and the smart (intelligent) materials used in architecture to realize the reconstruction model of the Brewery from Chernivtsi, using Additive Manufacturing technologies.






Poznań University of Technology, Poland (PUT) was represented by Mr. Remigiusz Łabudzki, Mrs. Natalia Wierzbicka, Mr. Pawel Zawadzki and Mr. Adam Patalas that presented the Reverse Engineering course and Research realized concerning materials used in industry

Each partner institution will identify potential calls for applying to future common projects in the frame of ERASMUS+, HORIZON programs, EEA grants, signing of ERASMUS bilateral agreements, realizing common BSc./ MSc. Diploma projects, etc.)

Finally, some general conclusions concerning the virtual e-learning platform for AMAZE project were drawn from the Short-term joint staff training event, and participants completed feedback on STTE and the final test. At the end of STTE, the company Edibon International S.A. was visited.

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