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EoCoE

Energy oriented Center of Excellence for computing applications

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D6.16 – M36

D6.16 Delivery of one long movie on EoCoE overall results

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* - The dissemination level is indicated as follows: PU – Public, CO – Confidential, only for members of the consortium (including the Commission Services) CL – Classified, as referred to in Commission Decision 2991/844/EC.

Document Control Sheet

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Change Log

Version	Author	Description
V1.0	Guillermo Marin	Initial Document
V2.0	George Kirkos	Final draft- Revision plus images
V3.0	Guillermo Marin	Final version

Table of Contents

Executive Summary

This deliverable explains the process of creating a 7-minute documentary film about the EoCoE project, its outcomes, and future challenges. The first part discusses the motivation and main target audience. The second elaborates on all the stages of pre-production (script writing and planning), production (recording of interviews, and creation of CGI visualizations), and post-production (compositing, editing, and music and sound design). Last, it provides the technical details of the video, software and tools used in the production, and the permanent link to watch the movie.

1. Introduction

This deliverable presents the short film documentary about EoCoE results, and explains in detail the procedure followed to create it. In this section we describe the target audience and primary goal of the film, and its general structure.

The present film is an iteration of *D6.12 Delivery of 4 short movies on WP1 to 5*, where we created short visualization videos (1-2 min. each) of the simulation data produced in the Work Packages 2 to 5. The production of those videos implied two important tasks, define a unified aesthetics for the visualizations, and acquire a good understanding of the data, of the particular research topic, and its place within its corresponding WP. That knowledge was crucial during the stage of screenplay writing because it allowed us to structure a comprehensive narrative of the complete EoCoE project, while enriching the story with specific details.

During its first meeting, the work group in charge of producing the final movie, identified young researchers and PhD candidates as the main target audience of the film. The primary goal of the video would be to attract them to pursue a career in HPC and energy areas. During subsequent meetings throughout the process, the script was shaped and refined iteratively to meet this goal, as described in detail in 2.2.

The original idea was to produce a pure CGI film, featuring just data visualizations and motion graphics. However, also at a very early stage of production, it was decided to substitute motion graphics and animated diagrams by interviews of EoCoE researchers, to stress the human factor in the context of both the project and the HPC field. How the interviewees were selected and how the interviews were conducted is explained in detail in 2.2 and 2.3.

Although the official date of this deliverable is M36, it was decided to advance it to M33 by the work group and the Project Executive Committee. The reason was to use the channels of the EoCoE project to disseminate the film while it is active, in order to maximise the reach and impact.

The final video is uploaded in the EoCoE's official Youtube channel and website in the following permanent links:

https://www.eocoe.eu/
https://youtu.be/EQcy_uYzqBk

2. Production process

2.1 Task leader and contributors

The main task leader for the production of these videos was Guillermo Marin from the Scientific Visualization team of the Computer Applications in Science and Engineering department at BSC. The work group that coordinated the movie was formed by George Kirkos (CyI), Maria Ramalho (FZJ), and Andrea Quintilliani (ENEA). The interviews were recorded and edited by Laurent Bernard of Weconext.

2.2 Script and planning

Documentary films based on interviews, like fiction films, need a screenplay in order to plan and organize the narrative. Our approach was to write a screenplay with the expected answers of the interviewees, then write the questions of those answers, and use both to conduct and, if necessary, guide the interviews. This process helped the interviewees to give concise and to-the-point answers using their own words, while staying within the margins of the overall narrative.

The script follows a classical three-act structure with: a) introduction, the presentation of the problem; b) confrontation, how the problem is addressed, and c) resolution, conclusions and future challenges. The problem in the introduction is accelerating the energetic transition, as stated in EoCoE's goals. The confrontation was explained through a selection of EoCoE's success stories. Finally, the resolution summarizes the accomplishments of the project and poses future challenges.

The success stories showcased in the film were selected so that all the scientific Work Packages (WPs 2 to 5) were represented. The incorporation of the success stories into the script, as well as the overall narration, was contrasted regularly with the researchers and the PEC members.

The interviewees were selected according to their relevance and relation with the ideas expressed on each part of the script, e.g., for the success story of WP5 we interviewed the WP leader. Similarly, for the final remarks in the concussions we interviewed the coordinator of the project, Edouard Audit.

2.3 Recording of interviews

The recording of the interviews, as well as complementary shots of the conference, and external locations, took place during the EoCoE Face to Face Meeting in Bath, during April 11th and 12th. These interviews were conducted by the coordinators of the work group, Maria Ramalho, George Kirkos, and Andrea Quintilliani. As some interviewees were not available during the Meeting, further interviews were recorded in May at CEA. Weconext, led by Laurent Bernard, was in charge of the sound recording, filming, and lighting of all interviews.

2.4 Complementary visualizations

Two new visualization videos were produced for the long film, one for WP2 about wind simulation, and one for WP4 about high-resolution simulations of atmospheric motion and water vapour. For both videos, we followed the same approach used in *D6.12 Delivery of 4 short movies on WP1 to 5.* First we defined the aesthetics of each video, then rendered the complete sequences in Arnold Render, performed a colour correction process, and finally edited to produce the final videos. In the editing process, each video was enriched with relevant information, such as titles, annotations, legends, and colour scales. This last process was made in close collaboration with the researchers that generated the data. As a result, the final videos work both as stand-alone pieces that can be viewed without further guidance, and as part of the long film of the present deliverable. The complementary visualization videos were reviewed and approved internally.

2.5 Post-production, editing, and music/sound

The editing of the film was made in close collaboration between the film-making team at Weconext, the authors of the script, and the task leader. At this point the order of the interviews and the inclusion of the visualization clips was slightly altered and edited with respect to the original screenplay, in order to make the film more dynamic.

The music of the movie is a royalty-free score purchased at Audio Jungle (ww.audiojungle.net). It was chosen to match the intended mood of the film, and the goal of being attractive to a young audience. The end credits, chyrons, logos, and additional annotations on top of the video were designed and implemented by Weconext.

3. Technical details and permanent link

The complementary visualizations were created with the same tools and techniques as those of *D6.12 Delivery of 4 short movies on WP1 to 5.* The simulation data is first visualized in the adequate scientific visualization software in order to identify the relevant aspects that will appear in the final visualizations. Then, the data is converted to standard film industry formats by means of proprietary conversion scripts and plug-ins developed at the BSC. Finally, the data is loaded into the animation software package Autodesk Maya. The renders were done with the SolidAngle Arnold renderer. Compositing, as well as the inclusion of titles and annotations, was performed in Adobe AfterEffects.

The final video is hosted in the landing page of EoCoE's website and official Youtube channel:

https://www.eocoe.eu/
https://youtu.be/EQcy_uYzqBk

The complementary visualization videos are hosted also in the project's official Youtube channel:

https://youtu.be/dQGjyolpWgI
https://youtu.be/RIboJn8N130

4. Final notes

This deliverable presents a 7 min. movie about the EoCoE project that combines interviews and data visualizations, in an effort to empathize with and be appealing to young researchers who are considering pursuing a career in HPC. The visual style, editing pace, and music are geared towards this objective. Snapshots of the final movie are included in Annex 1.

Besides the long film of the present deliverable, two short visualization movies were produced. One 53 sec. long for WP2 about wind flow modelling, and one 2 min. long for WP4 about high-resolution atmospheric motion and water vapour. Both movies include more shots than what appears in the long movie, and are intended to be used in conferences, presentations, and online platforms by the researchers, as well as all EoCoE members. Snapshots of these complementary visualizations are included in Annex 2.

The present movie is a significant dissemination tool for the EoCoE project, that can also be used in the EoCoE II project. The long movie and the short visualization videos will both be used in workshops, conferences, and meetings, where EoCoE participates. They can be used as a complement to other conventional means of communication, such as PowerPoint presentations, but also as stand-alone communication tools. They will also be disseminated via the various digital channels of the partner organisations i.e. Linked-in, YouTube, Facebook etc. increasing significantly the reach of the project, especially among the general public and young researchers.

Annex 1


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Energy oriented Center of Excellence


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Andrea Quintiliani


E·C·E
Urs Aeberhard
Photovoltaics Specialist, Forschungszentrum Jülich


Stefan Kollet


Daniela di Serafino


Edouard Audit

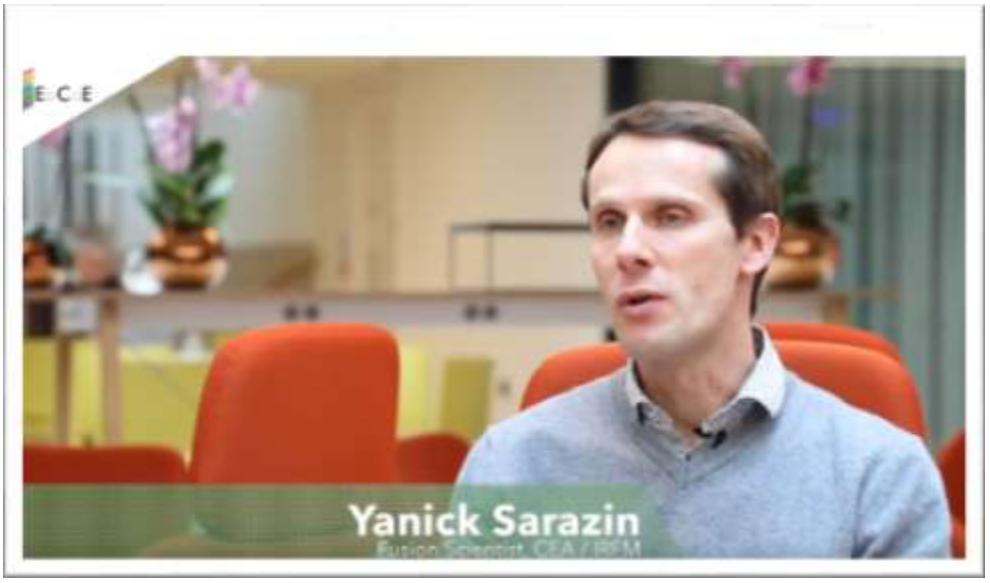

Massimo Celino


Alison Walker


Hendrick Elbern

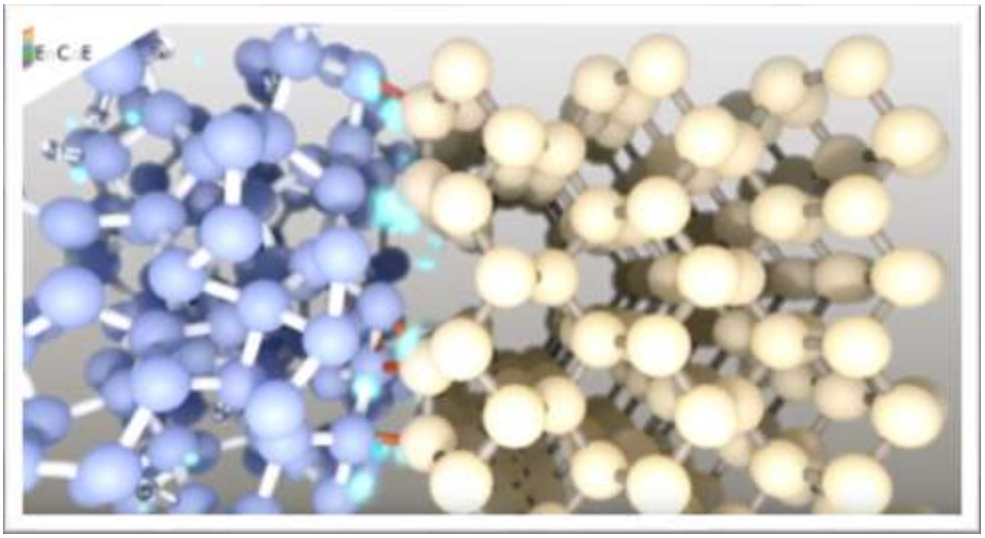

Mathieu Salanne

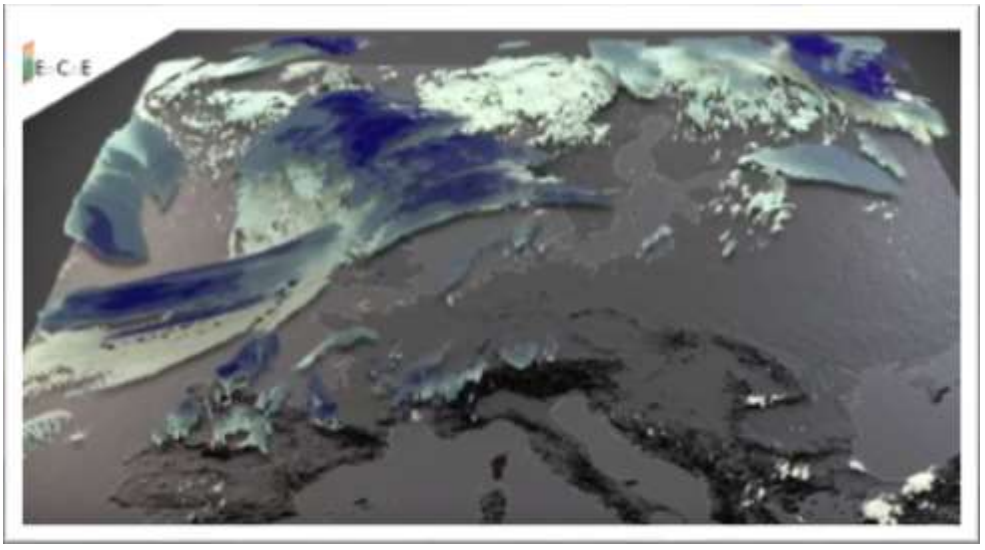

Herbert Owen

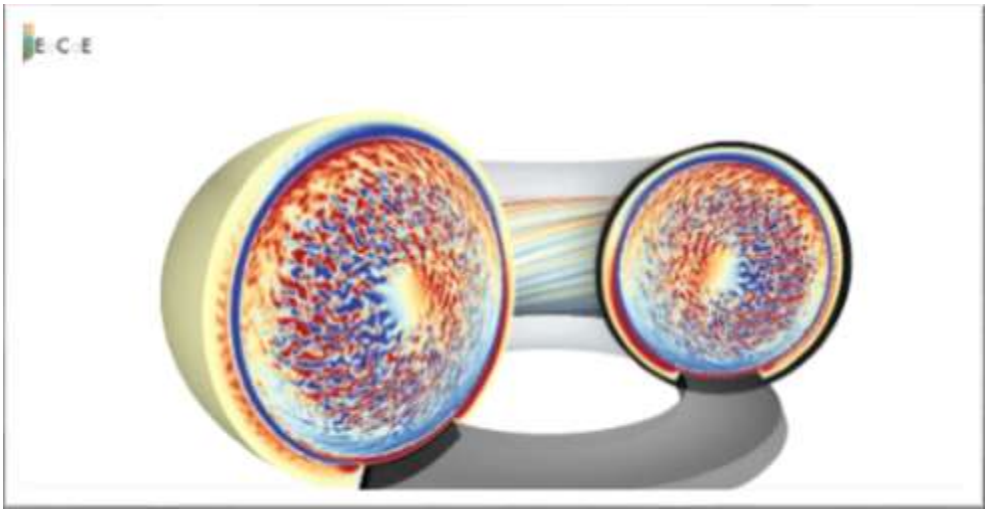

Yanick Sarazin


Matthieu Haefele


Nathalie Girard





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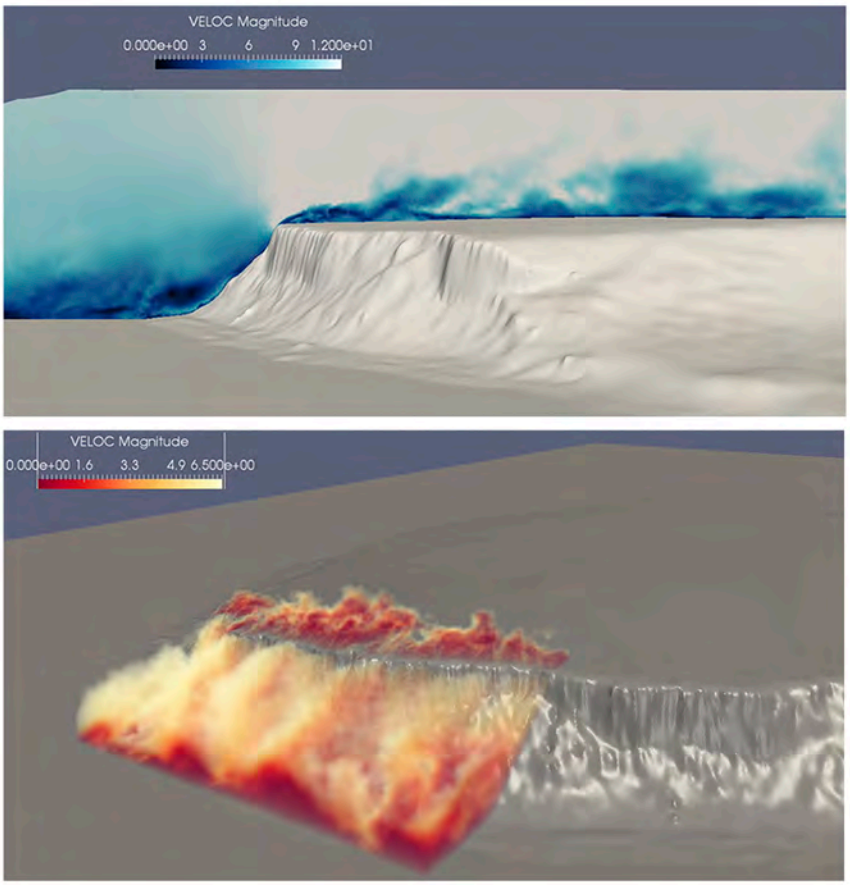
Horizon 2020
European Union funding

Annex 2

Complementary visualizations

WP2- Wind modelling

Original



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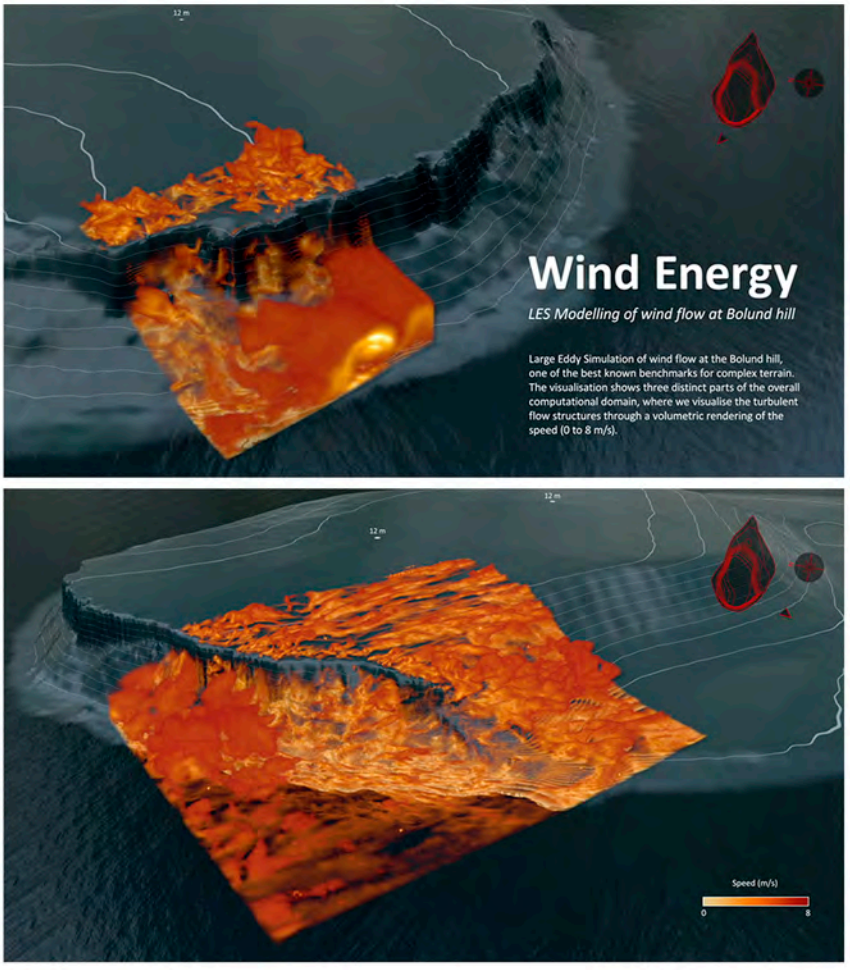
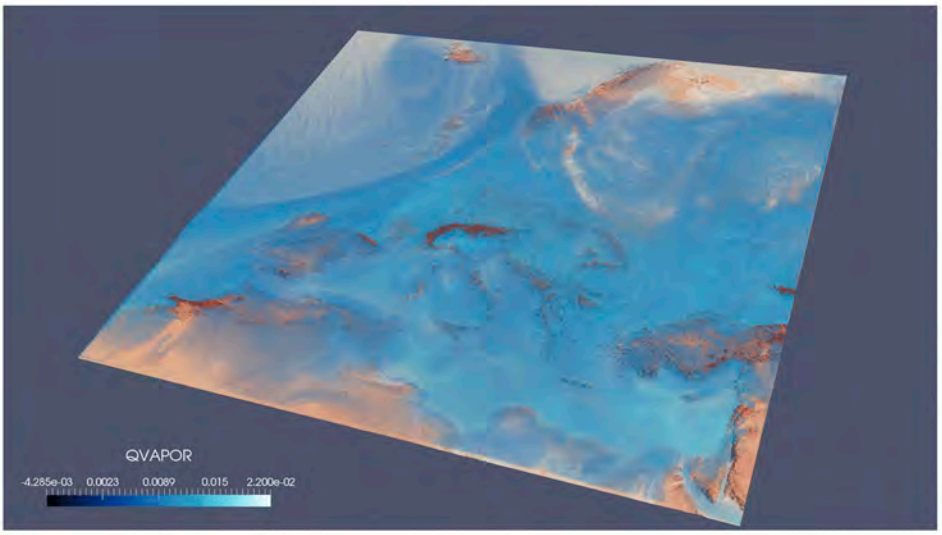


Complementary visualizations

WP4- Atmospheric Motion and Water Vapour

Original



Final