Project Overview

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NEM conference

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This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 957059.

Overview

Project Name: **COPA EUROPE - COllaborative Platform for trAnsmedia storytelling and cross channel distribution of EUROPEan sport events**

Topic: **ICT-44-2020 – Next Generation Media**

Start date: **1 November 2020**

End date: **31 October 2023**

Consortium

Partner	Main role	Country
WORLDLINE	Overall project coordination, industry expert on blockchain technology	Spain
FORTH INSTITUTE OF COMPUTER SCIENCE	Scientific and technical management, UC2, transmedia storytelling and XR	Greece
Fraunhofer Heinrich Hertz Institute	Federated learning schemes and 5G Berlin testbed	Germany
IBM	Blockchain platforms and infrastructure	Israel
NOVA	Leader of UC1, media test trials and provider of legacy sports matches	Greece
eBOS Technologies	Dissemination and communication strategy, ethical and legal framework	Cyprus
VITEC	Content streaming, ingestion, processing, management and distribution	Germany
LiveU	Leader of UC3, leveraging the project 5G testbed	Israel
EKTACOM L'EXPERTISE VIDÉO NUMÉRIQUE	Video processing, context-tailored transcoding, and algorithmic bricks and encoding tools	France

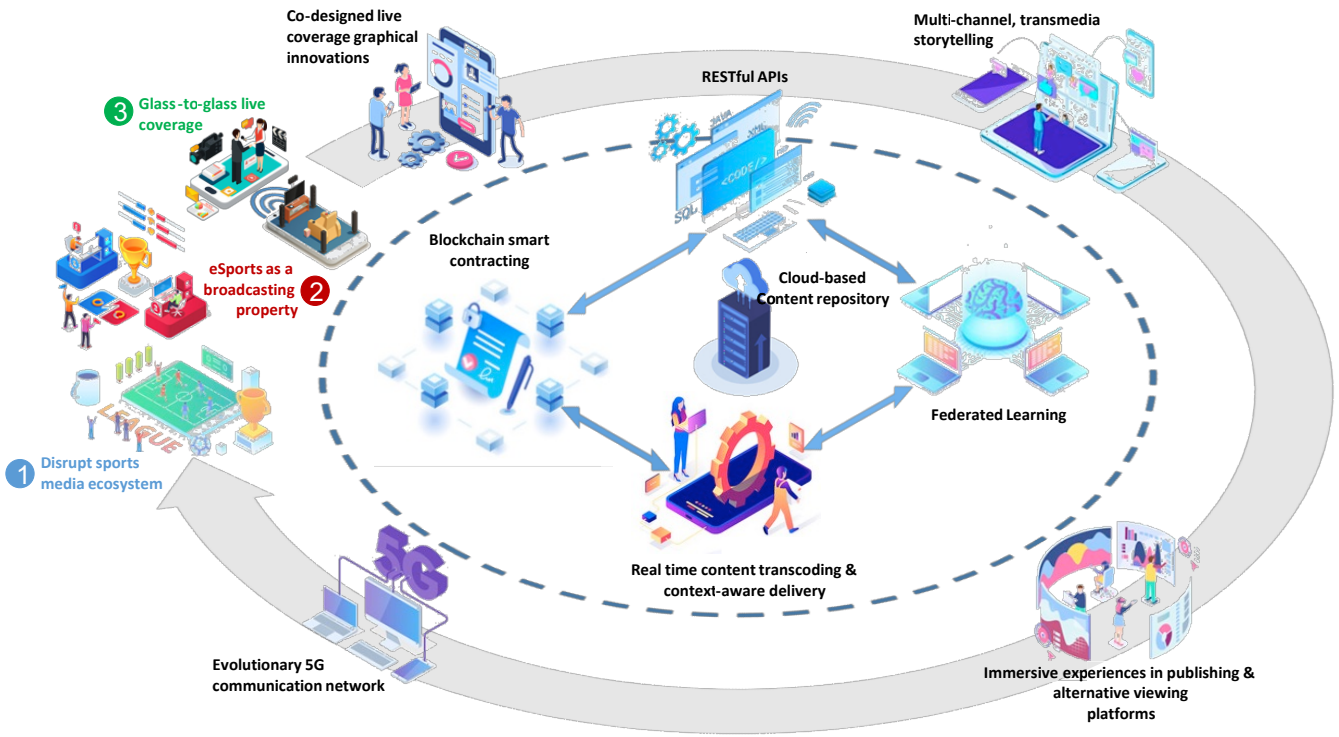
Main goal

COPA EUROPE aims to address the exploding demand for non-linear, more engaging **(e)sports content consumption**, globally and without borders by **leveraging Over-the-Top** and combining it with new set of **media technologies** that will democratise the **consumer experience**, enable **cost-sensitive**, **live video from anywhere**, and **personalize** the distribution to change the experience of each viewer individually.

Outcome

COPA EUROPE delivers **a cloud-based infrastructure** for harvesting, accommodating, transmitting and distributing digital media with regards to sport and competitive events, including the infrastructure needed to allow content creators and producers of live coverage to react to live outcomes, via innovative workflows.

Overall concept



- ✓ **Blockchain-enabled OTT subscription platform**
- ✓ **FL-drive personalized OTT services**
- ✓ **(Semi-)professional, cloud based, live content workflow**
- ✓ **Immersive transmedia storytelling**
- ✓ **5G-integrated deployments**

Objectives

1. To design a decentralised E2E platform for sports media channel federation, enrichment, and broadcasting.
2. To implement the infrastructure needed to allow content creators and producers of live coverage to react in an adaptable and flexible way to live sport outcomes.
3. To disrupt the OTT sport media services market with unprecedented flexibility of purchasing and subscription management options.
4. To produce higher quality services that respect users' personal data and privacy by capitalising on data network effects through federated learning.
5. To implement content adaption and Quality of Experience for interactive high quality media delivery.
6. To develop and pilot alternative platforms for broadcasting content and connecting fans with detailed, real-time information.
7. To validate the COPA EUROPE vision through solid, real-life use cases and public, live demonstrators.
8. To implement impact-driven dissemination, standardisation, and exploitation.

Use Cases

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Use Case 1: “Disrupt the sport media distribution ecosystem by transforming the existing centralised architectures”

UC1 evaluates the user-driven and user-centric media approach of COPA EUROPE targeting:

i. Immersive viewing experiences, harnessing the promise of alternative viewing platforms (e.g. VR) to enable fans to watch sports from entirely new perspectives;

ii. AI-powered personalization, leveraging on the collection and analysis of viewer data to adapt and tailor the user interface according to individual preferences; an

iii. Monetization via blockchain, providing economic incentives to different parts of the ecosystem so as to fund the development of content, bypass middlemen and persuade even the most reluctant consumers to pay for specific content

Use Case 2: “Cultivate European eSports as a broadcasting property”

UC2 focuses on eSports which has been quickly established as one of the fastest growing niches on the digital media market, attracting an ever-increasing amount of consumers, actors and investors throughout the European continent.

i. establishes closely working groups of eSports professionals and the core eSports fanbase to produce transmedia storytelling efforts make live coverage more entertaining, and easier to consume.

ii. leverages on the blockchain to demonstrate how COPA EUROPE disrupts current industry models related to streaming, sponsorship and standard sports compensation, proposing a shift to a more decentralized model

iii. continuously explores appropriate marketing activities to attract streamers and eSports stakeholders to the COPA EUROPE platform, so as to subsequently drive an organic audience flow.

Use Case 3: “Glass-to-Glass live coverage streaming over 5G networks”

UC3 brings streamers and viewers together in new ways, facilitating the delivery of non-stop live sport coverage broadcasting operation of any kind, through high-quality streams from any location.

UC3 aims to:

i. leverage existing commercially available 4G/5G networks and technology, to bypass huge investment costs required for high bandwidth communications lines and equipment to facilitate a highly-reliable service;

ii. capitalize on the blockchain to reward both content creators and viewers for engaging with the platform and thus innovating in new ways to co-fund future productions and content.

Applications

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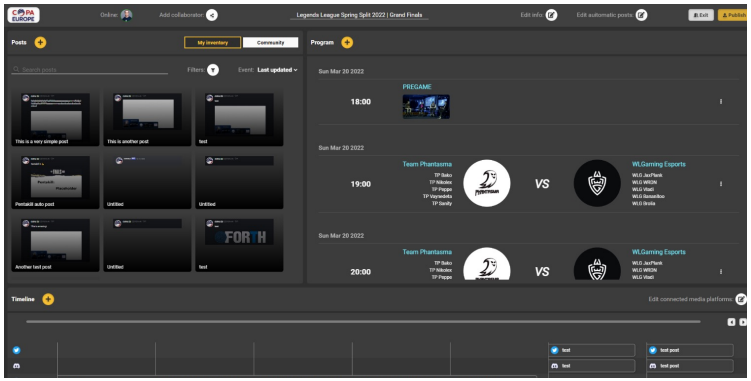
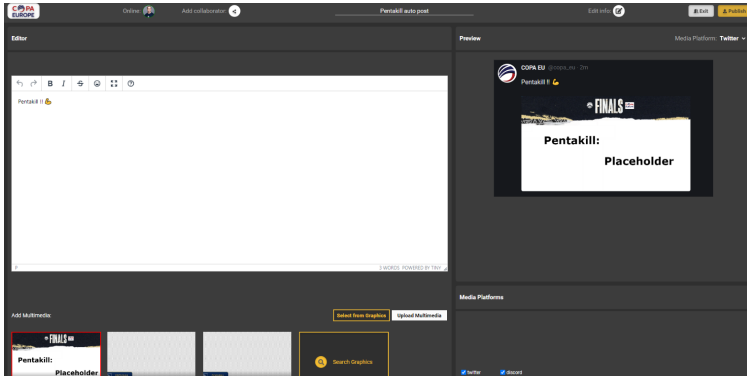
XR viewing application

- The Extended Reality (XR) viewing application supports an adaptable viewing experience that runs on different devices, such as Virtual Reality (VR) headsets
- Users can browse available events, receive recommendations, and watch livestreams as well as historical content.
- The application is set up as a virtual living room with multiple screens around.
- The video watching experience is augmented through information around the video, containing widgets that update in real time,
- Users are able to change their preferences and personalise their experience.

Transmedia Manager

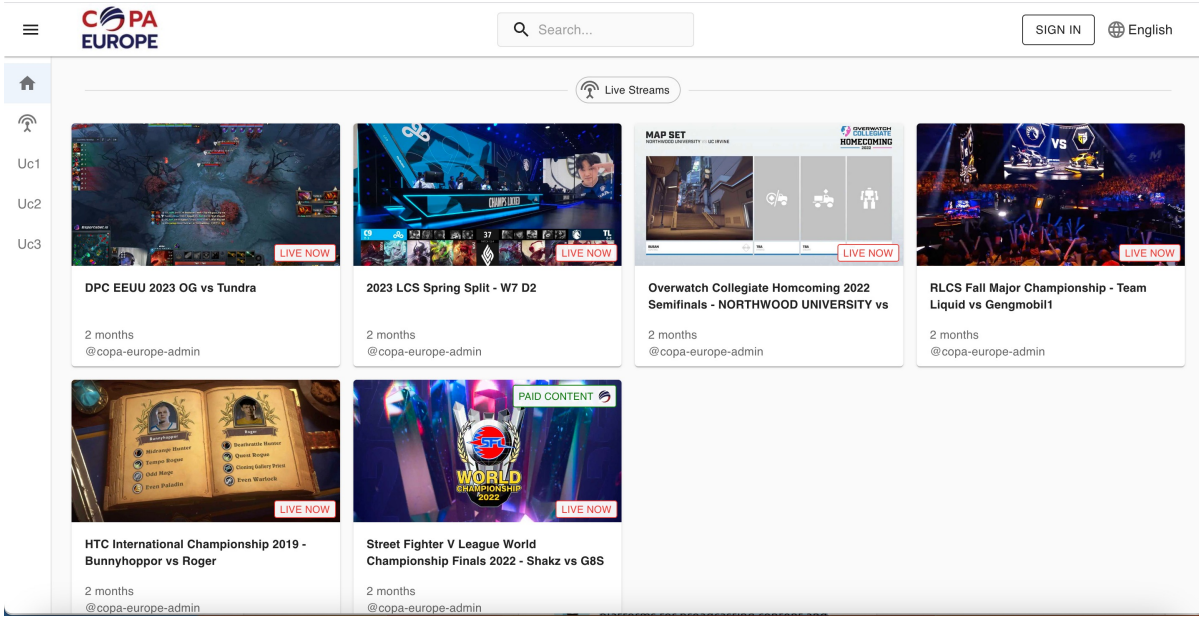
- Allows users to create an event, set up the teams that will participate, create stories that contribute to a transmedia storytelling narrative around the event, and post them in different social media platforms.
- In the form of a dashboard, allows users to manage the narrative they would like to create, specify automated posts and specific timelines around when and where to post stories about the event in order to engage the average media consumer.
- Provides a collaborative graphics editor that allows users to build graphics that can contain interactive data-driven content which is dynamic and can be updated in real time while it is used (e.g., a graphic that depicts the score of the game).





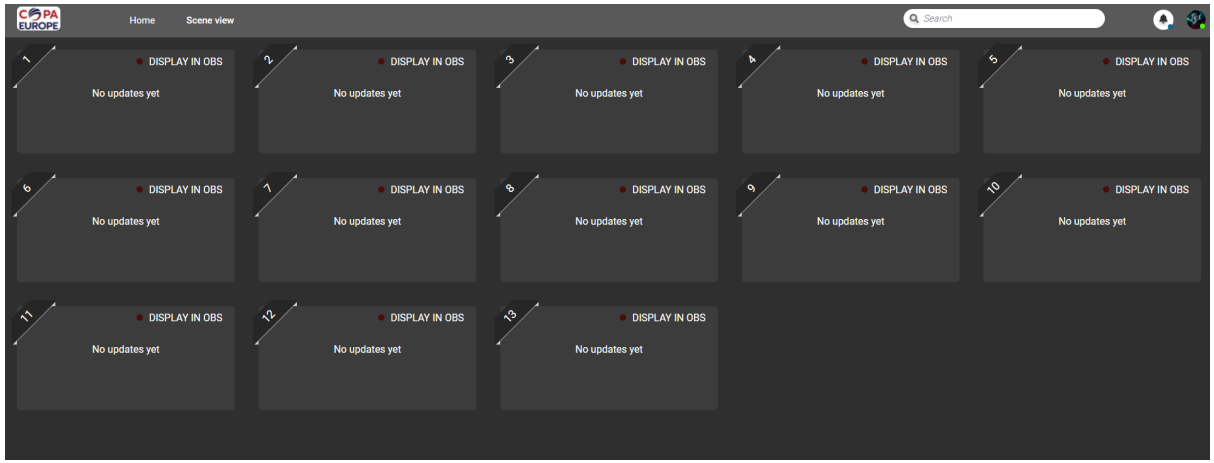
TV viewing application

- Provides the ability to end-users to watch live-streams or VOD through the COPA EUROPE platform.
- Provides additional content to the users' TV sets in a context-sensitive manner in parallel with the live broadcast.
- Provides the ability to the end-user to browse available events, receive personalised recommendations, and subsequently select a video or livestream to watch.
- The system also uses the monetary system of the COPA EUROPE platform, which is based on Blockchain to allow users to buy or subscribe and watch the available broadcasts.



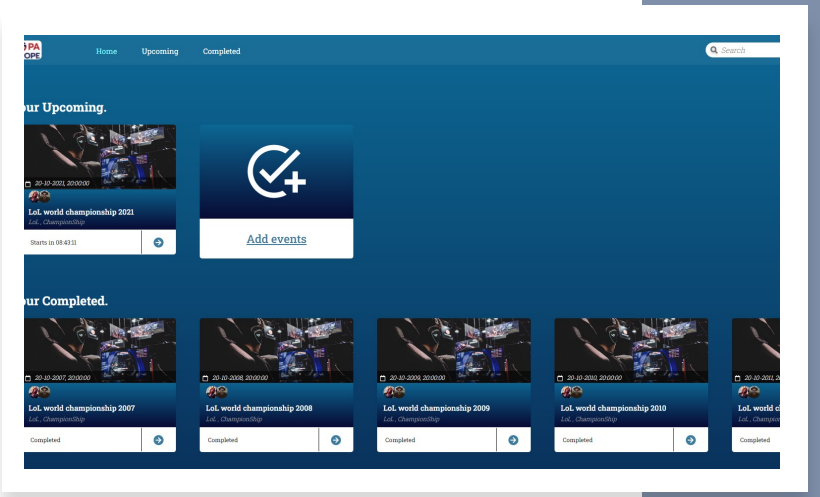
Graphics Director dashboard

- Web-based application in a form of a dashboard that provides the ability to manage the data-driven graphics and the scenes they will be displayed on
- In detail, the user can browse and select the different available graphics that are available through the COPA EUROPE platform and select them in order to overlay them in the livestream.
- The system, through a rule-based decision mechanism, recommends graphics that can be displayed based on actions taking place in the game or social media in order to allow the user to react and push graphics to a screen or the video mixer in a timely manner.



Graphics Commentator dashboard

- Web-based application in a form of a dashboard that provides the functionality to provision of information about important game events (e.g., a player performed one action that was out of the ordinary) in real time.
- Provides data about an ongoing event in real time to facilitate the user who may be a commentator, a spotter or a stats man.
- Enhances basic information such as a player scoring a goal with additional information that can help with the commentary of the event such as the history of the goal ratio for the player who scored the goal.
- Provides input from social media such as current trends around the event, user engagement, and in general social media data regarding the ongoing event.



UGC mobile application

- An application towards professional or semi-professional directors or video producers who will be able to use it in order to execute and operate local or remote workflows.
- Users can manage the video transmission of the event, including multiple livestreams and the transmission quality.
- Provides the means to sync the different streams and manage the way that they will be transmitted to the viewer applications.

Latest activities

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UC1 Small-scale trials

UC2 Small-scale trials

- Participants worked in pairs in this scenario. One acted as the director, and the other as the commentator. Then, the roles were reversed.
- **Task 1(Director):** Use the director dashboard to manage the data-driven graphics and the scenes they will be displayed on.
- **Task 2(Commentator):** Use the commentator dashboard to pin important game events and cast the game to viewers.

UC3 small-scale trials

- UC3 small-scale trial, covering a Radio-Controlled aeroplanes show (RC-planes).
- Two streams of professional sports transmission were unremittingly broadcasted into the cloud.
- From there on, the broadcast used a High-Efficiency Video Coding (H.265) over Secure Reliable Transport (SRT) to the Ektacom video Gateway, to the Vitec Media Asset Management (EZ-TV platform and to streaming via the Ektacom HLS Over-The-Top (OTT) streaming.
- The streams were viewed in real-time through the TVApp on smartphones and the VR application.

Contact

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Thank you for your attention!

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