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MOGPlay: A Decentralized Crowd Journalism Application for Democratic News Production

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***Abstract*—Media production and consumption behaviors are changing in response to new technologies and demands, giving birth to a new generation of social applications. Among them, crowd journalism represents a novel way of constructing democratic and trustworthy news relying on ordinary citizens arriving at breaking news locations and capturing relevant videos using their smartphones. The ARTICONF project [1] proposes a trustworthy, resilient, and globally sustainable toolset for developing decentralized applications (DApps). Leveraging the ARTICONF tools, we introduce a new DApp for crowd journalism called MOGPlay. MOGPlay collects and manages audio-visual content generated by citizens and provides a secure blockchain platform that rewards all stakeholders involved in professional news production. Besides live streaming, MOGPlay offers a marketplace for audio-visual content trading among citizens and free journalists with an internal token ecosystem. We discuss the functionality and implementation of the MOGPlay DApp and illustrate three pilot crowd journalism live scenarios that validate the prototype.**

***Index Terms*—Crowd journalism, citizen-generated content, decentralized app, social media, marketplace.**

I. Introduction

The significant evolution of mobile devices with high video and audio capturing features has enabled the rise of the term *"crowd journalism"*, also referred to as "citizen journalism" and "crowdsourced journalism" [2], [3]. This concept surfaced back in 2004 after the Indian Ocean tsunami. Since then, it has gained prominence in discussions about the current state and future of journalism as a collaborative model. Nowadays, it is common for ordinary citizens to be the first to arrive at breaking news locations and to capture relevant videos of the incident using their smartphones. Moreover, there is often a significant delay between the content captured by the first citizen to arrive at the incident location and the professional journalists. In cases of breaking news with critical timings, such as explosions, it is essential to inform the citizens as soon as possible, even if the broadcast is lower quality than waiting for professionals.

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Several citizen journalism websites foster active citizen-generated content production and collection[1] in an attempt to close the gap between participatory journalism and content published on social media platforms. Despite the increasing ease of generating content and participating in news production, crowd journalism also entails some risks since dark participation can deliberately produce misinformation and offensive content [3], [4]. Online newspaper participatory journalism [5] highlights that contributions requiring prior registration have higher content quality than anonymous involvement. Nevertheless, balancing the control shared between professional journalists and participatory audiences is paramount and a less covered topic [6].

To address this need, the *ARTICONF project* [1] funded by the European Union researches and develops a novel set of trustworthy, resilient, and globally sustainable tools for social DApp development and operation. It aims to address issues of trust, time criticality, and democratization for a new generation of federated infrastructures that fulfill the promises of privacy, robustness, and autonomy that proprietary social media platforms have failed to deliver so far. In particular, it:

1) Streamlines the creation of agile DApps using a two-stage permissioned blockchain architecture;
2) Automatically detects and analyzes contextualized interest groups and communities without privacy violation;
3) Elastically auto-scales social media DApps on adaptive cloud infrastructures according to their requirements;
4) Amplifies monetary inclusion in collaborative models through smart aggregation and guided analytics.

By creating an open, transparent, and agile ecosystem supported by underlying blockchain technology, ARTICONF presents itself as an alternative to centralized social media platforms controlled by single authorities.

This paper presents a case study of applying the ARTICONF tools for implementing, operating, and validating a novel crowd journalism DApp called MOGPlay. Section II summarizes existing crowd journalism mechanisms and their goals.

[1] https://www.sourcewatch.org/index.php/List_of_citizen_journalism_websites

Section III describes the MOGPlay crowd journalism DApp, including its stakeholders, functionality, and architecture. Section IV explains the support of the integrated ARTICONF tools for implementing the MOGPlay DApp. Section V describes the validation of the MOGPlay prototype for covering three public events with different profiles (cultural, sportive and entertainment). Section VI concludes the paper.

II. Related Work

Crowd journalism or participatory journalism refers to professional news production with active audience participation [2], [3], [7] and inclusion of citizen-generated content in professional journalism. This form of content intends to supplement the professional news production processes and differs from the autonomous content published on social media [3]. Media organizations are embracing participatory journalism as the means to overcome the crisis of traditional journalism falling into a cycle of lower audiences, revenue, content quality, and credibility [7], [8]. Other forms of audience involvement in journalism include crowdsourcing and crowdfunding, where citizens share ideas, sources, or expertise with journalists and financially support journalistic projects [2]. Both strategies help in shifting the traditional news production mindset and business model [2], [7].

An extensive literature overview on crowd journalism [3] divides citizen participation into three categories: formation, dissemination, and interpretation. Within formation, the increasing use of citizen-generated content by journalists supplements their news production process. The advantage of crowd journalism is its potential to attract new users, foster transparency and credibility in news generated and, therefore, build trust regarding its content, and increase web-traffic [8]. Its conditions and requirements include decentralization, collaboration, and (non-proprietary) democratization [7], attracting ever more citizens to actively contribute to news production. Crowd journalism enables the publication and dissemination of news that otherwise would not reach the public [8] and has a potential impact on all information areas.

Recent research addresses the open issue of managing crowd journalism content. Five isolated projects on active collaboration between professional journalists and audiences in the news [6] evaluate the different management models, participation roles and control shared over the final news produced. Additionally, [8] debates the need for formalized collaborative proprietary platforms to securely leverage citizen content into professional news production. In particular [4], [9] discuss the implementation of the SEMPRATO open-source semantic platform managing a flexible collection of textual participatory citizen content, but lacking content prioritization according to journalists' needs [4].

The state-of-the-art highlights the need for collecting and managing high-quality citizen content that meets the journalism standards. A decentralized platform increases trust and reliability from citizens' perspectives and motivates participation. Crowd journalism on audio-visual content for the media production is a less covered topic and the focus of this paper.

III. MOGPlay: Social DApp for Crowd Journalism

This section presents the functionality and architecture of the MOGPlay crowd journalism DApp in detail.

A. Crowd Journalism Stakeholders

Users can assume three crowd journalism roles when using the MOGPlay DApp: citizen, news reporter, or news platform manager. Most functionalities are available to all stakeholders, but some have restrictions or special permissions. All stakeholders can contribute to the coverage of breaking news events, either anonymously or using a personal account.

1) Citizens: have normal permissions and act either as workers to produce community content using their own time and resources or as video consumers to visualize contributions from other users (live or on-demand). Citizens can receive textual feedback from the editing room while capturing a live event, which motivates them to continue streaming.

a) Workers: use their personal smartphones to access the MOGPlay DApp to capture high-quality video or audio of a breaking news event.

b) Video consumers: use the MOGPlay DAppp to watch multiple simultaneous live videos showing different perspectives of the event from different workers. In this process, consumers classify and rate the videos in real-time considering various parameters, such as the impact. Consumers can also access a *news video marketplace* to browse, search, filter, sort (e.g. by rating, duration) and preview contributions from other users (in VOD format), and download their own videos. Consumers can also trade videos with other users and receive rewards for their efforts in covering an event.

2) News reporters: are professional journalists who, similar to citizens, can act as workers to produce live video contributions or as consumers to browse them. News reporters have privileges over citizens, as follows:

a) Enhanced access: While citizens can freely register and access their accounts, only event administrators can create news reporter accounts before accessing the MOGPlay DApp with enhanced access rights;

b) Audio feedback: News reporters can receive audio feedback alongside text messages while creating live feeds;

c) News video editor: News reporters have access to a news video editor that provides professional video switching of live streams created on the platform. In this interface, they can analyze, browse, filter and select the most relevant streams, relayed to external broadcast channels such as YouTube Live.

3) News platform managers: are professional journalists with more permission than news reporters. They access an administration dashboard to create events associated with their area of interest. During the event, only citizens located within this specific event area can contribute to the community. News platform managers can invite new professional users to join the platform through the administration dashboard.

B. Non-functional requirements

The MOGPlay's non-functional requirements for a suitable crowd journalism quality of service and experience (QoE) are:

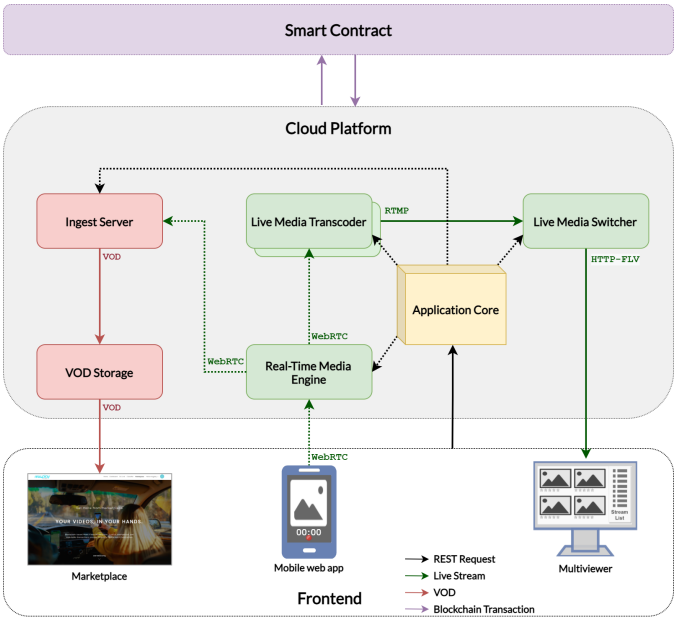


Fig. 1: MOGPlay DApp architecture.

a) Integrity: to ensure correct access to the available content and to prevent any unauthorized access.

b) Scalability: to support a large number of users creating and watching simultaneous live streams, requiring elastic infrastructure scaling depending on the dynamic workload;

c) Responsiveness: of the authentication, media capture, and marketplace interfaces on different devices (including mobile, tablet, and desktop). This content must dynamically resize with the browser dimensions;

d) Usability: of an intuitive interface targeting a diverse audience of people with varying levels of expertise;

e) Performance: ensuring fast (real-time) response time for previewing multiple simultaneous video streams.

C. MOGPlay Architecture

Figure 1 presents an overview of the MOGPlay crowd journalism architecture comprising three major microservices.

1) Cloud Platform: is the backbone of the DApp comprising the six back-end microservices responsible for media processing, serving live or VOD videos to the end-users and processing their input, among others (see Figure 1).

a) Real-Time Media Engine: is a WebRTC microservice responsible for receiving the live video and audio captured by the users and relaying it to the Live Media Transcoder for further processing. It also acts as the signaling broker for the WebRTC connections, establishes the media sessions between the web clients, and exchanges the necessary metadata between them to coordinate the communication;

b) Ingest Server: is a media engine that handles the conversion from video streams to playable files, connected to the VOD Storage of all generated videos.

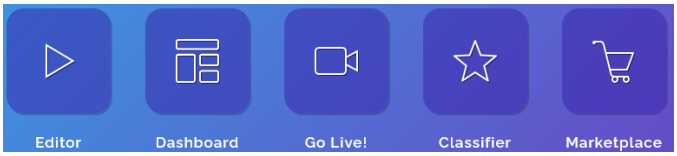


Fig. 2: MOGPlay crowd journalism home page.

c) VOD Storage: is a media database that stores all captured videos, either temporarily or permanently with a unique associated fingerprint. Upon completing a transaction (e.g. marketplace video purchase), the video is available for download and the corresponding fingerprint rewards its producer using the blockchain platform.

d) Live Media Transcoder: is an engine for transcoding live streams captured by the mobile phones to RTMP streams with a video resolution of 720 px, H.264 video codec, and AAC audio coding. Stream transcoding needs elastic scaling to a large number of resources and represents the input to the Live Media Switcher;

e) Live Media Switcher: is a media server capable of simultaneously receiving multiple RTMP streams and selecting one to feed broadcast channels such as YouTube Live. It also provides four monitoring streams compatible with HTML5 standards to the Multiview Editor.

f) Application Core: is an essential microservice for processing, storing, and retrieving data using a database. It coordinates the media flow of the live feeds and supplies the information needed by the MOGPlay front-end app to work properly. In addition, it communicates with the Ingest Server to process and store a video after a worker stops streaming.

2) Smart Contract: registers and validates all information relevant to the MOGPlay DApp, such as new events, new videos, video classifications, and purchases. It is also responsible for identity registration on the blockchain. All users invoke or query the chaincode instantiated in the blockchain network through this identity. An identity can have different permission policies depending on the user type. For example, users must have previously purchased a video to access it.

3) MOGPlay App: displays all functionalities in a unified front-end web application with a single authentication system. Upon login, users get access to different functionalities depending on their permissions. For example, news platform managers have access to all five interface components through the DApp home page displayed in Figure 2 and explained in the following paragraphs. On the other hand, citizens do not have access to the Editor and Dashboard options.

a) Multiview Editor: (see Figure 3A) enables news reporters to browse and watch live feeds, and communicate with the workers. It also allows them to select and publish relevant feeds to external broadcast channels, such as YouTube Live.

b) Administration Dashboard: (see Figure 3B) enables news platform managers to create and manage events and professional users. They can also create events associated with an area of interest for collecting live streams.

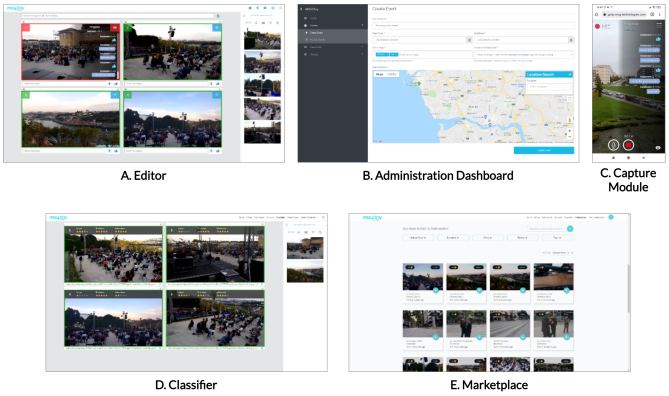


Fig. 3: MOGPlay user interface components.

c) Capture Module: (see Figure 3C) allows the workers to capture audio and video using their mobile devices and stream it to the Cloud Platform. It also handles heterogeneous essence encoders available in the browser and selects the ones taking the best advantage of the available bandwidth.

d) Classifier: (see Figure 3D) aggregates the Multiview Editor with the Content Classifier. News reporters employ it for selecting videos and create own perspectives of an event, and for rating and classifying content based on preferences.

e) Marketplace: (see Figure 3E) is a blockchain platform where consumers can preview videos, view their ratings, and download them. In reward, the content generator receives tokens handled by the blockchain, which allows users to create, produce and buy videos in a secure, decentralized, and democratic fashion with ensured anonymity and ownership. This compensation mechanism encourages citizens to adopt the MOGplay platform despite other well-established social media platforms.

IV. ARTICONF Tools for Crowd Journalism

Figure 4 displays the integration of the MOGPly DApp with the ARTICONF platform and operational tools underneath.

A. TIC: Trust and Integration Controller

TIC provides an agnostic tool for blockchain deployment underneath the MOGPlay DApp with increased outreach to trustworthy stakeholders (e.g. citizens, news reporters) in the crowd journalism marketplace. Additionally, TIC facilitates an advanced environment to the MOGPlay DApp providers and developers for quick deployment and configuration of a secure crowd journalism network for: 1) automating and customizing the MOGPlay permissioned blockchain network specification with reduced time and complexity (see Figure 5); 2) implementing smart contracts for secure live streaming of news content its and corresponding metadata; 3) achieving high-throughput news content generation, storage, an trading through blockchain transactions; 4) providing real-time visual feedback on traceability of executed news content transactions across the MOGPlay blockchain network.

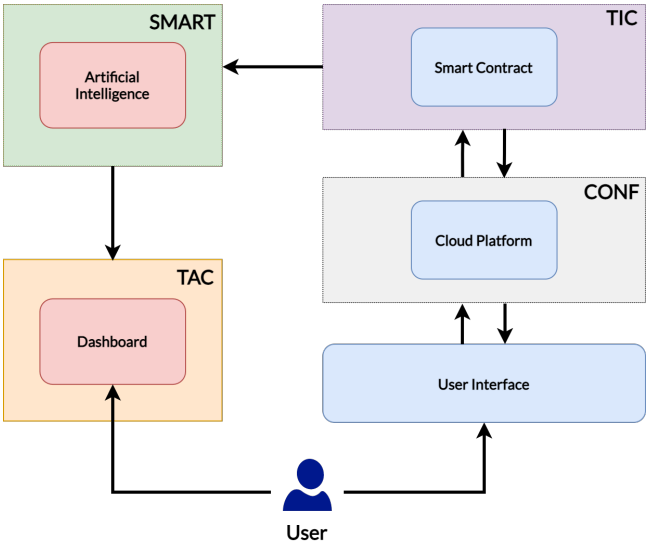


Fig. 4: MOGPlay DApp integration with ARTICONF tools.

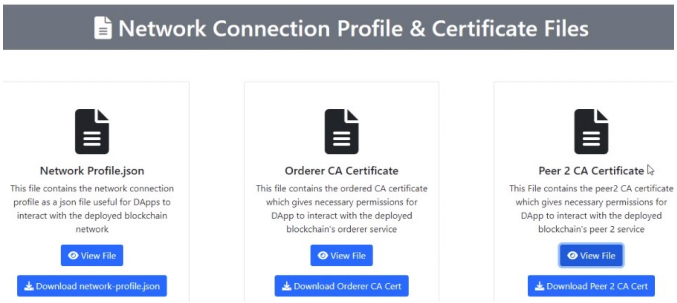


Fig. 5: Blockchain configuration trough the TIC dashboard.

a) MOGPlay stakeholder federation: implements a decentralized blockchain consortium of citizens, news reporters and news platform managers with guaranteed consistency, accountability and traceability of news content creation, sharing, and propagation. Additionally, TIC facilitates the integration of third-party authentication providers with a unique verified identity in the MOGPlay federation. TIC uses fault-tolerant consensus algorithms to achieve soft real-time agreement among various news platform managers, which is crucial for large-scale crowd journalism services handling multiple and frequent streams of news content production supply chains.

b) Relationship system: is a Turing-complete component of the blockchain that enables MOGPlay stakeholders to set news content sharing and rights conditions through smart contracts, giving them complete control over their content. TIC also generates a membership agreement between citizens, news reporters and news platforms managers to a establish secure communication with the MOGPlay network and access authorized news content in persistent cloud storage.

c) MOGPlay certificate authority: is a client-side software development kit that issues certificates to MOGPlay stakeholders, encrypting sensitive news content before broadcasting and persisting it on the blockchain and cloud storage.

B. CONF: Colocated and Orechestrated Network Fabric

CONF provides a tool for customizing a cloud infrastructure for the MOGPlay microservices considering specific crowd journalism requirements,: 1) high throughput of news media streaming ($100\,\mathrm{Mbit\,s^{-1}}$) during video ingestion; 2) on-demand provisioning and deployment of resources for dynamically increasing number marketplace users; 3) monitoring and visualization of resources, services, and DApp metrics for offering a high QoE to MOGPlay users.

1) Infrastructure description: uses the CONF interface to describe the MOGPlay microservice (e.g. news video ingestion, selection, transcoding) requirements for deployment. Based on this description, CONF generates a plan for the underlying virtual infrastructure running a MOGPlay DApp instance. For example, a generated plan can contain two virtual machines (VM) acting as nodes in a Kubernetes cluster and an NFS server for data persistence. The developer can modify the plan, add more VMs or change their properties, such as number of cores and RAM size.

2) Infrastructure provisioning: The MOGPlay DApp developer instructs CONF to create the necessary resources (e.g., VM, network) on a specific cloud provider as a preparation for deployment. In this stage, CONF organizes the installation of all the necessary software dependencies such as Kubernetes and the NFS server required by the MOGPlay services.

3) DApp deployment: enables CONF to deploy the MOGPlay microservices (e.g., for media ingestion and transcoding), and configures their auto-scaling thresholds. Afterward, CONF validates the microservices by ensuring that all interface and dashboard URL endpoints are accessible to the MOGPlay DApp providers and developers. Finally, CONF returns all the infrastructure attributes, such as public IP addresses of the VMs and the URL endpoints of the deployed MOGPlay DApp, including its monitoring services.

4) Monitoring: After provisioning and deployment, CONF monitors various runtime metrics of cloud infrastructure (i.e. CPU, memory, network) and presents the information to the DApp developer using graphical dashboard (see Figure 6). CONF processes the aggregated data using ensembles of machine learning-based anomaly detection and root cause analysis models, and proactively detects performance abnormalities in the MOGPlay DApp and blockchain network (e.g. news content related transaction failures, lower throughput). If necessary, it takes corrective actions to prevent the failure or congestion of MOGPlay microservices for a fluent QoE.

C. SMART: Semantic Model with Self-Adaptive Relevant Technology

The SMART tool retrieves, parses and analyzes the crowd journalism information stored on the MOGPlay blockchain federation. SMART uses immutable content traces embedded within the blockchain network to provide a semantic mapping that captures thematic mismatches between news consumption and creation activities. Such a contextual mapping enables the crowd journalism marketplace to enhance the news consumption through discovery and grouping of content

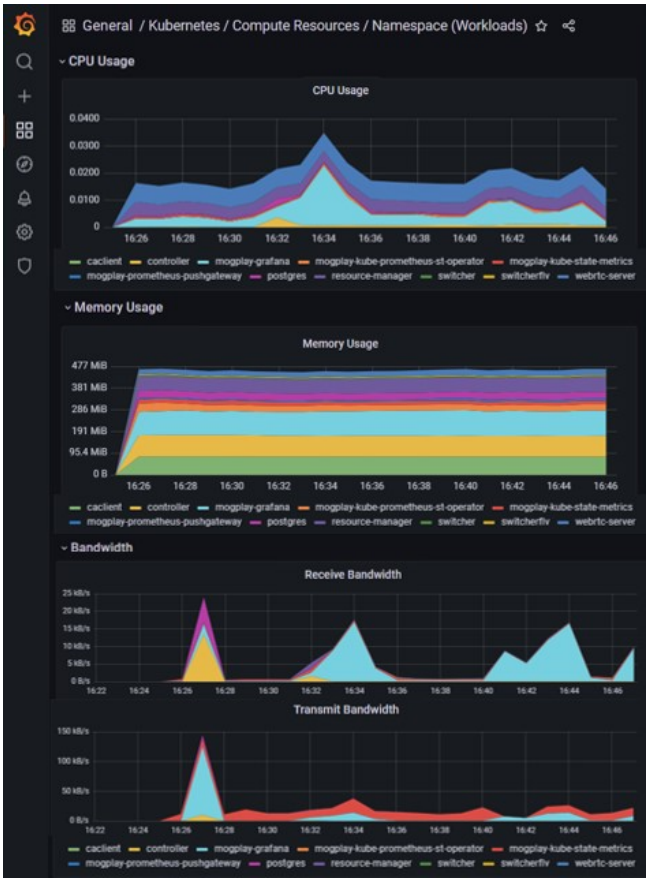


Fig. 6: CONF resource monitoring dashboard.

based on thematic context (e.g. politics, movies, climate, sports). Additionally, SMART's proactive event-based clustering enables the marketplace to identify semantically similar pseudonym user groups based on news type and consumption preferences. It also personalizes content recommendation and predicts the news consumption of thematic contexts. SMART further provides trust metrics for news content authenticity and pseudonym users reputation, which facilitates user-level decision-making and trustworthy and authenticated content creation, management and propagation.

To achieve these goals, SMART integrates with the TIC tool that initializes a *"SMART user"* with each instantiated blockchain network handling access permission of user data for analytic purposes. The SMART user initiates a request to pseudonym users for accessing encrypted data associated with their transactional activities (e.g. content creation, view, purchase). Upon getting access permissions, SMART the user pushes the gathered data to SMART tool using a RESTful API, which allows decentralized analysis of transactional activities without privacy violation with important stakeholder benefits, presented in the following paragraphs.

a) Contextual grouping of themed news content: . SMART integrates a multilayer contextualized semantic linking microservice [10] that splits semi-structural transactional blockchain data into unique contexts (e.g., politics, movies,

sports) based on popularity, demand and consumption pattern. Furthermore, SMART clusters contextualized news content transactions with similar properties using the augmented OPTICS [11] (e.g., politics, movies, creation timestamp). Within a thematic news content context for example, an explanatory cluster could span over an international politics theme IP in a country C. Hence, the cluster of pseudonym users performing transactions receives a label $IP - C$.

b) Crowd journalism event prediction: SMART partitions the labeled cluster groups into multiple temporal time windows that allow discovery of cluster evolution (e.g. growth, shrinkage) chains over time, capturing behavioral patterns in news creation and consumption. For this purpose, SMART employs machine learning methods based on the historical data to predict the future state of the cluster, which allows the news marketplace to proactively recommend personalized content for consumption based on their past behavior.

c) Trustworthy news management: SMART employs a decision-making methodology that engages citizens, news reporters, and news platform managers in content voting and classifying trustworthy news. In this process, SMART employs authenticity ratings for news content and a rescaled sigmoid model [12] to compute the citizens' reputation ratings. SMART associates each user with a contextualized *local reputation* reflecting the trust in news creation within the same context (e.g., politics, sports, movies). In contrast, the *global reputation* provides enhanced weighted trust ratings of a user across all contexts of the crowd journalism marketplace. Such a design allows SMART to provide fair and democratic decision-making for content trust management and prevents infinite accumulation of reputation by any user.

D. TAC: Tools for Analytics and Cognition

TAC aggregates the contextualized information generated by the SMART tool and presents it on a user-friendly dashboard. TAC develops geospatial, temporal, return on investment, return on collaboration, visualization and guided analytic microservices that helps to meet specific crowd journalism criteria and requirements, such as: 1) identify locations with most user engagement; 2) overview the history of created and purchased news videos to understand users' activities; 3) identify successful news videos creators and influencers in the crowd journalism social network; 4) visualize event registration and login statistics over time.

Initially, TAC aggregates the data flow obtained by the SMART tool, and fits it in the corresponding microservice group based on the content and format. Each microservice uses its mechanism to interpret and analyze the data matching it with the specific crowd journalism requirements. The outcome of this process a visual interactive guided analytic dashboard exporting valuable insights to expand and strengthen the business activities and profits and improve users' QoE using an efficient and meaningful information transfer from the machine to the human brain. The news platform managers can perform various reorganization, filtering, analysis, and visualization activities over the dashboard data.

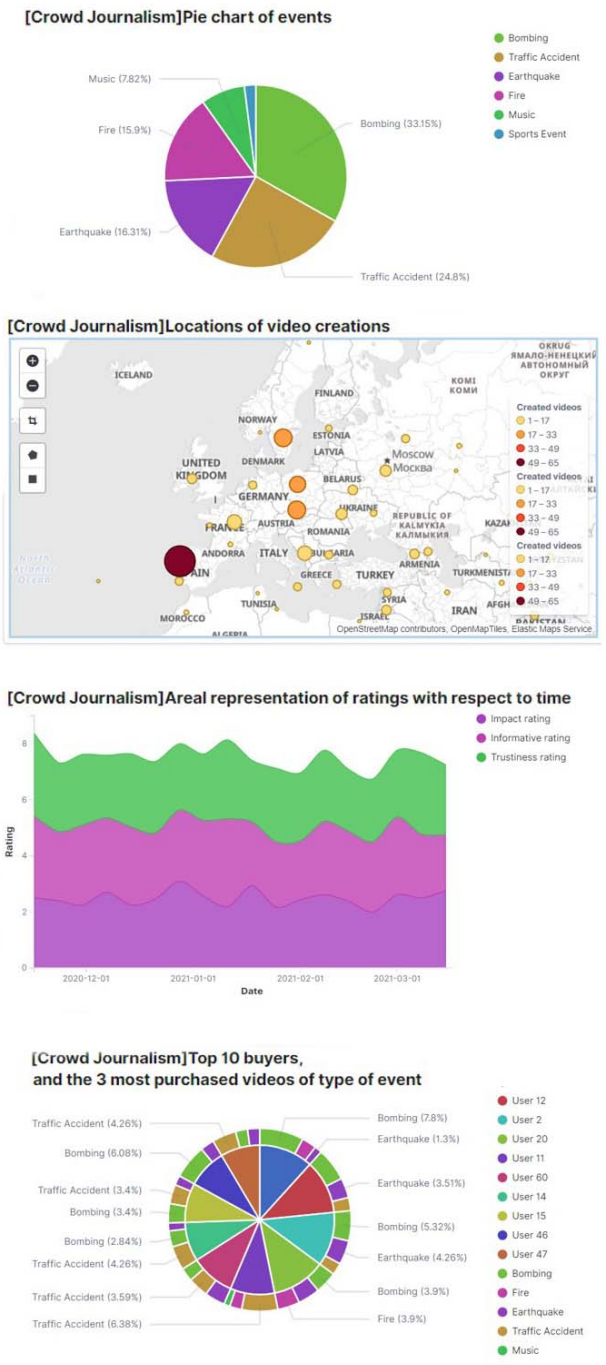


Fig. 7: Crowd journalism statistics computed by SMART accessible though TAC.

Figure 7 shows a TAC dashboard covering four significant business insights related to the crowd journalism marketplace:

a) Crowd journalism events: presents a set of contextualized news and percentage of related marketplace videos.

b) Geoprofiling video capture and creation: visualizes the geo-location of videos created for different news events.

c) Marketplace ratings: provides a temporal analysis of the cumulative impact (i.e. citizens outreach and views), informative (i.e citizen endorsement), and trust (i.e. authenticity) ratings of all news events and videos;

d) Buyers and video purchase trends: provides a visual analysis of top ten video buyers and three most popular crowd journalism event videos purchased on the marketplace.

V. Crowd Journalism Validation Pilots

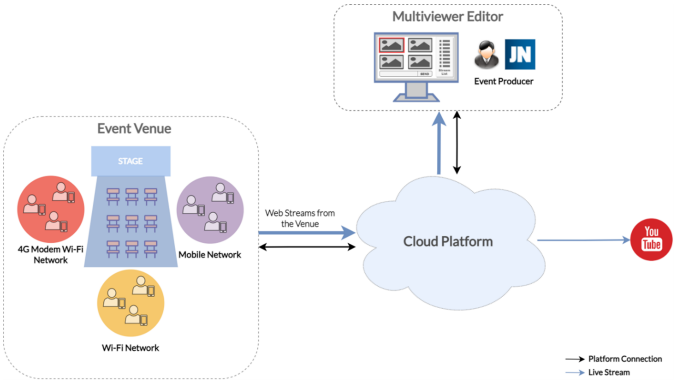
This section presents three validation pilots conducted to explore the use of MOGPlay DApp for live coverage of public events with complementary social profile: cultural (Porto Book Fair), sportive (Jungfrau Marathon) and entertainment (Jump Around hip-hop concert). Sanitary and social distancing rules imposed by the COVID-19 pandemic constrained all pilots to smaller citizen participation and limited the validation scale.

A. Porto Book Fair

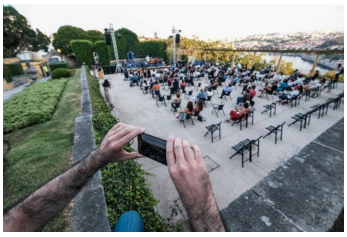
The first pilot took place at the 2020 Porto Book Fair, held annually at Jardins do Palàcio de Cristal and featuring a series of outdoor concerts at the Terreiro da Casa do Roseiral. The pilot covered the show of the Retimbrar musical artist following the workflow depicted in Figure 8a. Figure 8b displays trial participants using the Capture Module on their smartphone to create live videos, streamed to the Cloud Platform and sent to the Multiview Editor. The production of the event's footage involved technicians and journalists from the Jornal de Notícias (Portuguese newspaper), who used the Multiview Editor on a backstage high-end computer to preview the live event footage with high QoE, communicate with the streamers and commute among videos broadcasted to YouTube Live (see Figure 8c). Figure 8d shows a real-time snapshot of the number of live feeds processed during the event.

B. Jungfrau Marathon

The second pilot covered the 28^{th} Jungfrau Marathon in Interlaken spanning over $40\,\mathrm{km}$ and an altitude difference of $1829\,\mathrm{m}$ on the famous Eiger, Mönch, and Jungfrau mountains of the Swiss Alps. During the marathon, the trial participants captured footage of a blind celebrity called Chantal Cavin, a former world record holder in swimming and triathlete, well-recognized in the Swiss sports community. The citizens used public transportation to capture the footage in four locations (see Figure 9a): Interlaken (start line), Lauterbrunnen, Wengen and Eigergletscher (finish line). The event coverage was a collaboration with the SWISS TXT subsidiary and the center of multimedia expertise of the Swiss Broadcasting Corporation. SWISS TXT operates a similar tape-based crowd journalism app called HELIOS *CJ Reporter* that allows citizens to record content for the broadcasting company using their smartphones. The goal of the joint coverage was to propose a unified crowd journalism solution to stakeholders that extends the CJ Reporter with MOGPlay media capture, streaming, curation, and editing functionality. Table 9c summarizes the monitoring metrics resulting from the marathon coverage. A summary of the extensive YouTube coverage of the marathon is available at https://www.youtube.com/watch?v=iGk90k77HDY.

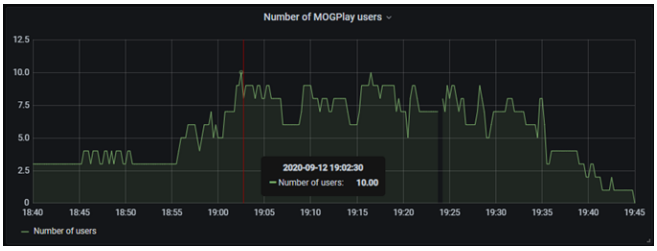


(a) Book Fair pilot workflow.



(b) Capture Module (citizens).

(c) Multiview Editor (reporters).



(d) Number of live feeds.

Fig. 8: Porto Book Fair pilot.

C. Jump Around Concert

The third pilot covered the Jump Around event at the Superbock Arena in Porto, a Portuguese show of over three hours long hosting the most renowned national hip-hop artists uniting its four pillars: rapping, DJing, breakdancing and graffiti. The aim was to promote different aspects of this cultural movement with the most significant expression among the young public. The participants captured live videos using the CJ Reporter or MOGPlay apps (see Figure 10a) and sent them to the Cloud Platform and the Multiviewer Editor (see Figure 9b). This interface enabled the event producer to preview the live footage of the event, switch the video shown on the output stream, communicate with the streamers and broadcast the output stream on a private YouTube Live channel (see Figure 10b). Table 10c summarizes the parameters defined to monitor the performance of the crowd journalism pilot during the Jump Around concert. The feedback concerning the unique lighting, sound and crowd gathering challenges was positive too. Although the event organizers prohibited a public broadcast, short video summary of the coverage is available at https://www.youtube.com/watch?v=eWsRT7yrSEQ.

(a) Marathon capture locations.

(b) HELIOS CJ Reporter and MOGPlay apps for joint video capture.

Metric	*Result*
Number of live streams	173
Number of trial citizens	11
Number of simultaneous live citizens	6
Total marathon footage	6 h 24 min
YouTube live stream views	51

(c) Marathon live coverage metrics

Fig. 9: Jungfrau marathon pilot.

(a) Live concert snapshot.

(b) MPGPlay – HELIOS CJ Reporter workflow.

Metric	*Result*
Number of live concert streams	122
Number of trial citizens	13
Number of simultaneous live citizens	5
Total concert footage	7 h 15 min

(c) Live coverage metrics

Fig. 10: Jump around pilot.

VI. Conclusion

We presented in this paper a novel DApp for crowd journalism called MOGPlay that provides a novel strategy for collaborative news production. MOGPlay exploits the ARTICONF project tools and ecosystem for decentralized collaborative media production that enables secure live news video capture, streaming, editing and trade. We presented three crowd journalism pilots that employ the MOGPlay DApp for live capturing of cultural, sportive and musical events and illustrated its potential to animate the media and journalism industries in a dynamic, rewarding and trustworthy ecosystem, motivational to all involved stakeholders. The next steps involve the definition of adequate business models for deployment and commercialization among media stakeholders. MOG Technologies will further explore the MOGPlay DApp in the PLAYOFF project, funded by the Portuguese National Innovation Agency.

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