

The Wall of Moments: an immersive event experience

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ABSTRACT

In this paper a prototype application developed by VRT –as part of the ICoSOLE project– is described. *The Wall of Moments* aims to combine user-generated content with professional content, in order to create an immersive experience for people who can't attend an event. The demo uses a selection of content recorded at the Marconi Moments, a small-scale test shoot in the Marconi studio at the VRT campus.

Author Keywords

ICoSOLE; VRT; user-generated content; the wall of moments

ACM Classification Keywords

D.2.2 Design Tools and Techniques: User interfaces

INTRODUCTION

Within the ICoSOLE project [2], different (cost-effective) ways of capturing spatially outspread events are considered. A core research challenge is to synchronize all the content in time and space to create an immersive experience for people who can't attend an event.

HOW IT CAME TO BE

A lot of content is captured in the ICoSOLE project, and a big part of this content is user-generated. An issue with UGC, however, is inferior quality (especially the audio). This is not a big problem when e.g. shared on social media, but it's a different case when used in a professional production. On the other hand, a lot of high-quality equipment such as 4K and omnidirectional cameras are used in the project as well. It was our goal to find an intersection between these two to kinds of content to enhance the user experience at home.

We started with the premise that we wanted user-generated content to capture ambiance, not (video/audio) quality. When we want to deliver high quality, we switch to a stream that can guarantee this (e.g. a professional

production or omnidirectional stream). We also aimed to build an application that connects users with each other and with peers at the event, without inventing the 101th social network; instead making use of existing social networks. Lastly, we also required the audience at the festival to have some added value. They, after all, have to capture the videos for our prototype.

We created a first prototype –using YouTube content– and invited colleagues from a wide range of services at VRT to test it out. We gathered a lot of input and used it to create an enhanced version, which came to be *The Wall of Moments*. To be able to test it out at the Marconi Moments, we also created a simple web-based capture application, which enabled the audience to send in videos from their own smartphone near-to-live.

THE WALL OF MOMENTS

User-generated content is a key element in *The Wall of Moments*: captured right in the action makes it often very unique. To increase the authenticity of the experience, user-generated content is synchronized with professional content and presented in a vibrant way to the end user.



Figure 1. Screenshot of *The Wall*.

MOMENTS

Moments are short video clips, made by people attending an event. These clips should tell a story, show something unique, catch something a professional camera would probably miss.

The Wall combines the latest and most interesting *Moments* in a mosaic and is highly personalized: the social network of the users is taken into account to decide what is shown.

Moments can be added to *My Experience*: favourites from which an aftermovie is generated for each user individually.

SYNCHRONISATION

Synchronising the content in time and space is achieved by using various kinds of metadata. Time and location are obvious, but also video analysis is done to find reference points in different video streams to be able to synchronise them. This analysis is part of the ICoSOLE core system.

Because everything is synchronized, professional content and *Moments* can be played together (e.g. picture-in-picture). Also, interesting *Moments* can be shown on a personalized timeline, making the user experience social and interactive, rather than linear.

MARCONI MOMENTS

A first small-scale test shoot –Marconi Moments– was organized in the Marconi studio at the VRT campus last October. Professional content was captured using a wide variety of devices, including TV cams and omnidirectional cameras.

Everyone in the audience was able to record short clips with their own smartphone and send them in to a backend we provided. After uploading was completed, they were placed in a queue and shown on a screen next to the stage a short time thereafter, in a two-by-two matrix. This has proven to be a popular feature: if we only account for user-contributed videos, we are able to reproduce 89% of the second concert.



Figure 2. Two screens were setup next to the stage at the Marconi Moments.

Following the test shoot, we organized a small survey for the audience. Some interesting insights:

- 73% used the capture app to upload Moments
- 51% favoured the screens next to the stage
- 66% considers using such an application on a real festival

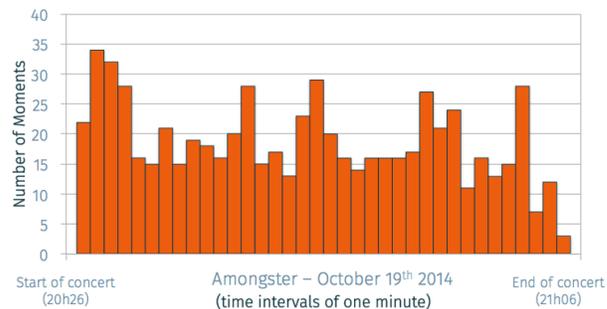


Figure 3. Number of received Moments per minute at the second night of the Marconi Moments.

CONCLUSION AND FURTHER RESEARCH

The Wall of Moments is a prototype of a use case defined in the ICoSOLE project. User tests and especially the *Marconi Moments* sparked a fair amount of interest. Furthermore, we have a better understanding of problems we'll run into when attending larger events: copyright issues and filtering of inappropriate content among them. Test shoots in 2015-2016 shall provide further insights into improvements of applications for end users in terms of usability, design and features.

Our methods follow an iterative approach: user tests are organised and results are subsequently evaluated to enhance future prototypes. Further research has to be performed for the back-end as well in terms of synchronisation and annotation.

About the author

Rik Bauwens attended Hogeschool Gent and obtained his MSc in Applied Engineering (Computer Science) in 2011. Thereafter, he studied English and music, whilst developing web applications for third parties. In 2012, he co-founded an e-learning project, followed by the development of a health care web application. He was responsible for R & D, design and database/server management. Rik is passionate about innovation in web technologies and new media. In 2014, he joined VRT research & innovation.

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