

Deliverable

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D3.2 Capture

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Dissemination Level		
P	Public	
C	Confidential, only for members of the consortium and the Commission Services	x

Abstract: This deliverable describes the hardware and software components delivered for Pilot 1 resulting from Task 3.2 Capture.

REVISION HISTORY

Revision	Date	Author	Organisation	Description
1.0	16.2.17	Stepahan Valente	VS	-

Disclaimer

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Statement of originality:

This document contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

EXECUTIVE SUMMARY

This Deliverable is the implementation and tools status implemented in M8 (Pilot 1), for the capture component.

CONTRIBUTORS

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1. INTRODUCTION

In the ImmersiaTV workflow, the capture and stitching component is responsible for grabbing and processing video images from 360 omnidirectional camera systems (constructed using multiple physical cameras).

The main task of this block is to combine several video streams into one omnidirectional video stream (stitching process).

Once the omnidirectional video is processed and prepared it's an input for the Encoding module.

2. FUNCTIONALITY

ImmersiaTV's stitching is carried out by two commercial software products developed by VideoStitch.

The first one is **VideoStitch Studio** [1], for post-production environments (i.e. Pilot 1). It takes video files coming from multiple cameras as inputs, and combined them into a single omnidirectional video output file.

The second one is **Vahana VR** [2], for live stitching (i.e. Pilot 2). It takes live video streams coming from multiple cameras as inputs (through either HDMI or SDI physical inputs) and combines them into a single omnidirectional video output stream (either written to physical HDMI or SDI ports, or a network interface).

The two commercial software products existed prior ImmersiaTV. ImmersiaTV allowed VideoStitch to improve the calibration workflow used by Studio and Vahana VR, through the inclusion of rig presets: instead of calibrating a project from scratch, users have now the possibility to select common rig configurations, to further guide the calibration procedure, as illustrated from Fig. 1 to Fig. 3.

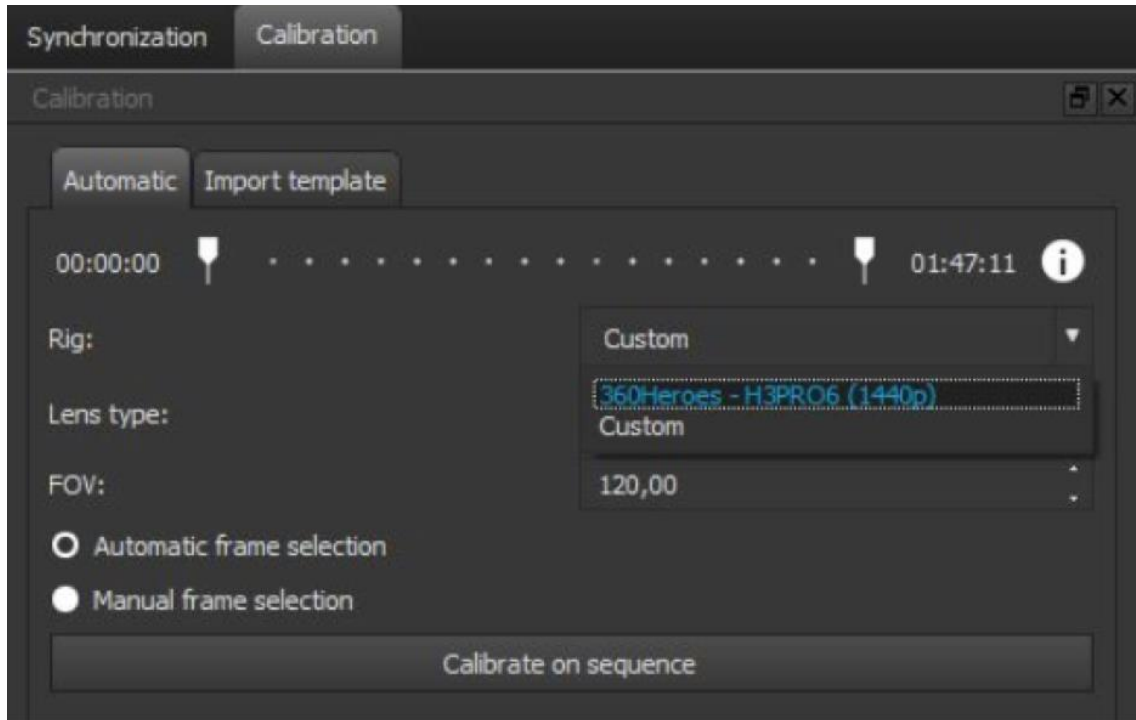


Fig. 1 - User selects a rig configuration in VideoStitch Studio (here, a 7 cameras 360Heroes rig)

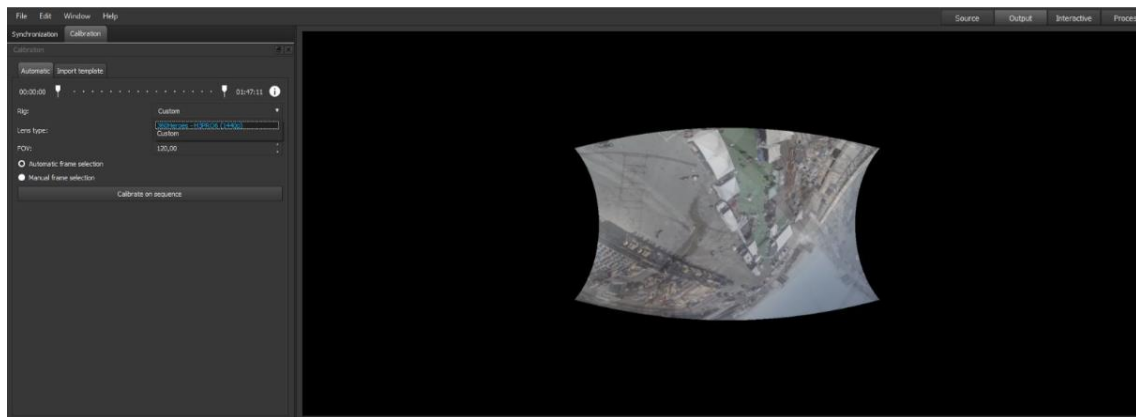


Fig. 2 - Project output before the selection of the camera rig

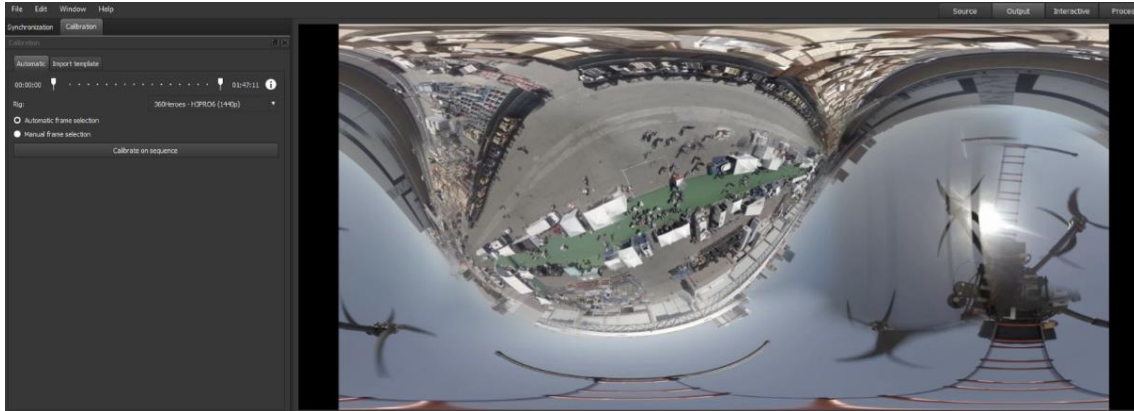


Fig. 3 - Project output after the selection of the camera rig

A similar workflow is being created into Vahana VR.

The feedback provided during Pilot 1 was also beneficial to improve the automatic time alignment of video files, through audio and motion analysis, in VideoStitch Studio, in terms of speed and robustness.

3. CODE REPOSITORY

The software is closed source. There is no public or ImmersiaTV repository.

VideoStitch provides licenses to the ImmersiaTV partners, see [Annex I – Licences provided to partners](#).

4. INSTALLATION GUIDE

The installation guide and support pages are available on VideoStitch's website: <https://www.video-stitch.com>

5. CODE DOCUMENTATION

Since the provided software is in closed source, no code documentation is available.

REFERENCES

- [1] <http://www.video-stitch.com/studio/>, main product page for VideoStitch Studio
- [2] <http://www.video-stitch.com/live-vr/>, main product page for Vahana VR

ANNEX I – LICENCES PROVIDED TO PARTNERS

VideoStitch Studio licenses

Partner name	Contact person	Number of licenses
i2cat	Joan Llobera	2
Lightbox	Maria Pacheco	3
EPFL	Touradj Ebrahimi	2
VRT	Tom Cornille	2

Vahana VR licenses

Partner name	Contact person	Number of licenses
i2cat	Joan Llobera	2
Lightbox	Maria Pacheco	2
EPFL	Touradj Ebrahimi	1
VRT	Tom Cornille	2
Fisheye	Wim Forceville	2
PSNC	Maciej Glowiak	1
iMinds / EDM	Steven Maesen	2