



NEM Summit 2021

EU Project SAUCE - Smart Assets for re-Use in Creative Environments

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Filmakademie Baden-Württemberg and Animationsinstitut

- Founded in 1991, located in Ludwigsburg near Stuttgart, Germany
- Courses in: Directing, Cinematography, Screenwriting, Production and Animation
- 2002 foundation of Animationsinstitut as an autonomous entity of Filmakademie
- 550 students total, ~120 in Animation

- FMX 2022, Conference on Animation, Effects, Games and Immersive Media

FMX2022

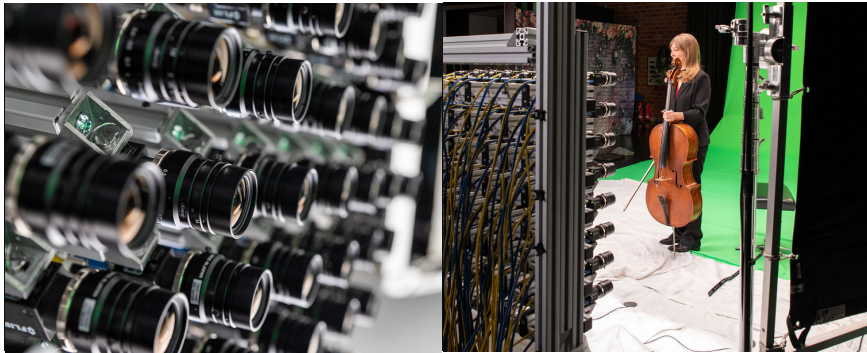
ON SITE MAY 3-5 | ONLINE MAY 6



EU Project SAUCE

Smart Assets for re-Use in Creative Environments

- 3 year EU funded project
- Commercial and academic consortium
- Keyfocus:
 - Asset discovery, re-use & transformation (by AI)
 - Semantic Animation
 - Light Fields (from acquisition to creative use)
- Immersive Media Productions
 - Light Field production “Unfolding”
 - LED Wall for In-Camera Visual Effects (ICVFX)



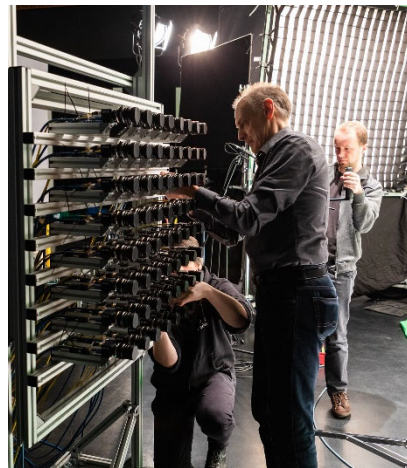
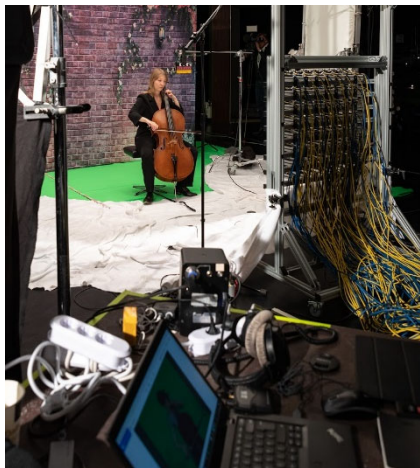


Unfolding

- Cellist *Isabel Gehweiler*
- Concept in cooperation with professional DoP
- Focus layers of physically impossible lens effects
- Multiple “versions” of cellist appear in white room

- Goals
 - Investigate how LF can aid creative process
 - Challenges in handling LF cameras and data
 - Reference data for further developments by project partners

- Unfolding 1.0 and 2.0



Unfolding 1.0

- Preproduction
 - Previz/ LF simulation in Blender
 - Synthetic recreation of Saarland LF Rig
- Calibration and recording
 - TV Studio of Saarländischer Rundfunk
 - Auto calibration tools by TCD
 - 4 takes at 3.86 TB total
- Post Production
 - Refocus and tilt-shift effects via depth estimation
 - Compare Nuke version with TCD LF Renderer

<https://youtu.be/UnsmKQjO4ro>

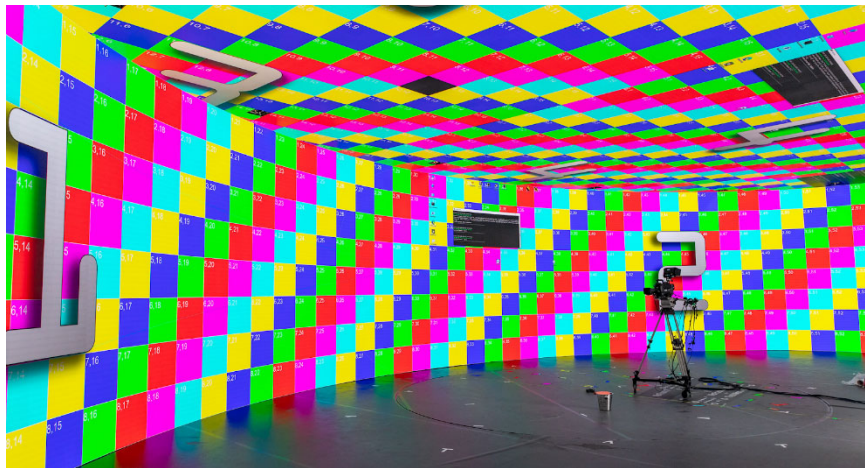


Unfolding 2.0

- Using full LF data in real-time environment
- Synthetic background for better depth perception
- Visual output on holographic display

- “Quilt” format of 45 Images for Looking Glass
- 8 cameras by row → add. interpolated views
- Real-time Unity version needed customization of Quilt from single 45 images to support video

- Summary
 - SAUCE Tools for LF handling quite helpful
 - Still complex and heavy to handle
 - Future productions require rich media formats



LED Wall - ICVFX

- Virtual Production and large scale LED Walls
- Replace green screen by Mixed Reality Setup
- In-Camera Visual Effects (ICVFX)

- D shaped construction of 3 large screens (front, back, top) @LED Cave in Mannheim
- Reduced Setup (7x3m) at Filmakademie Studio

- Various SAUCE developments tested
 - Asset Search and Transformation Framework
 - VPET Character Animation
 - Crowd Tools

https://youtu.be/NpM_fWv_WdU



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