



Enabling Tomorrow's Stories

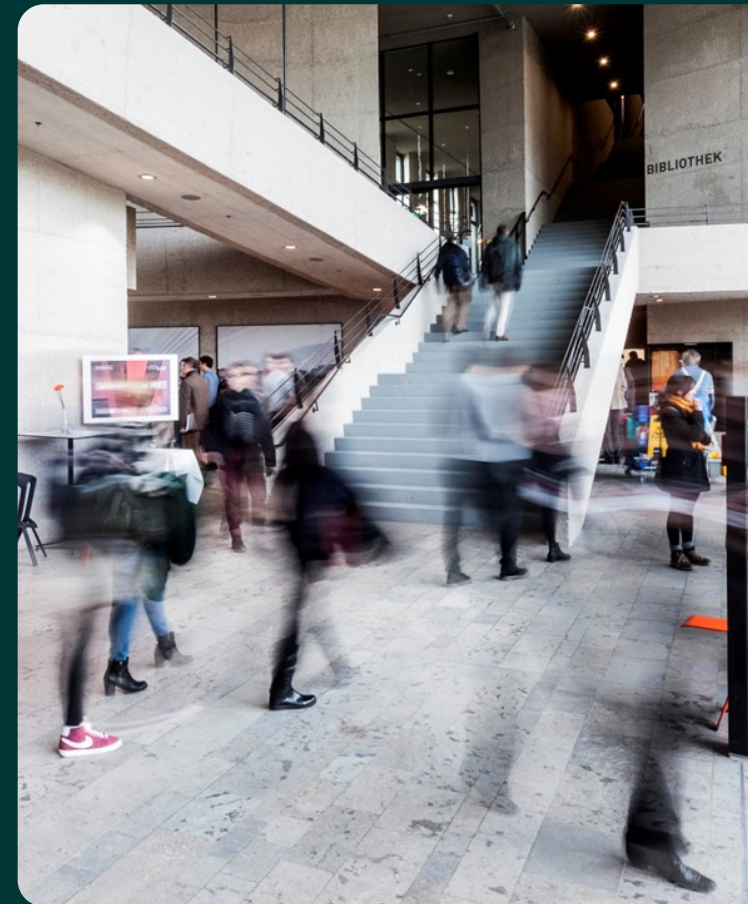
Research and Innovation Management at the
CreatiF Center, HFF Munich



HOCHSCHULE
FÜR FERNSEHEN UND
FILM MÜNCHEN



- Approx. 400 students
- 7 study programs
- 27+ professorships
- Approx. 80 employees in teaching and administration
- 120 films per year



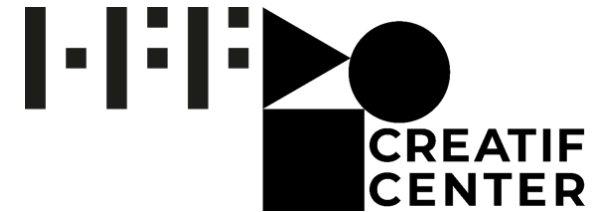
THE EVOLUTION OF MEDIA CREATION

A 10-Year Vision for the Future of Media
Production, Post and Creative Technologies



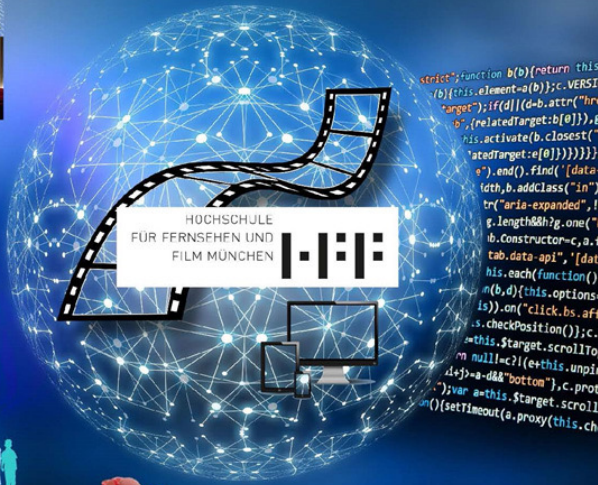
- Implications for research and teaching
- Relevance for Germany as a film location

→ Innovation management at HFF



- Part of *Innovative Hochschule* program
- Funded until 2027
- Focus on transfer
- Funded by the federal and state governments
- Consists of three sub-projects


Transfer Strategy at HFF Munich

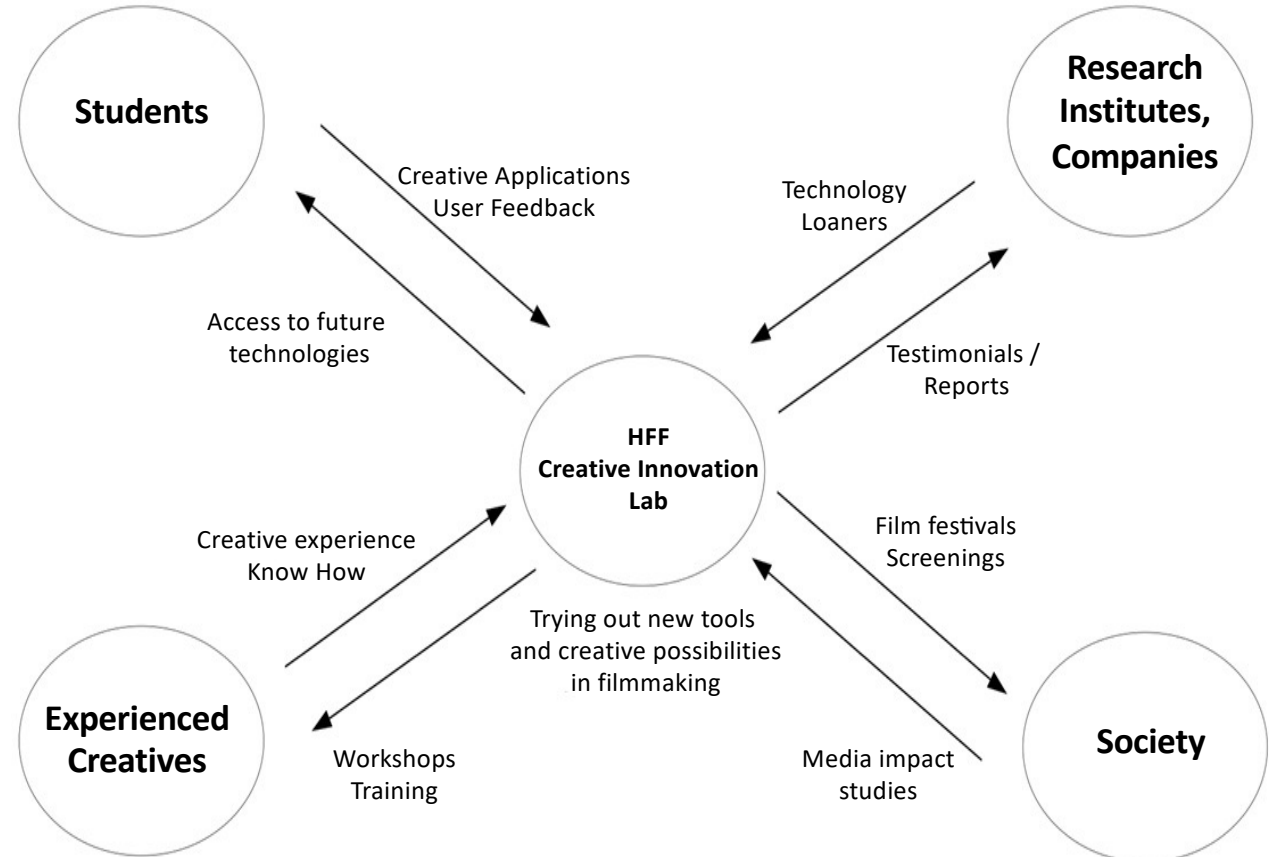


**Innovative
Hochschule**

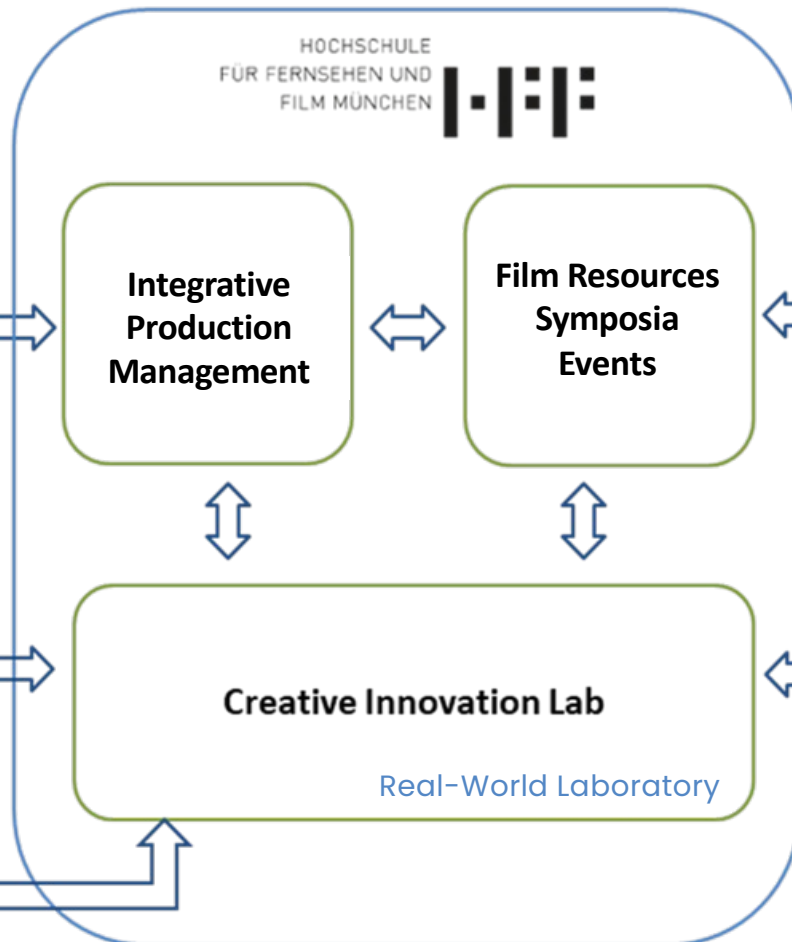
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 Bundesministerium
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GWK

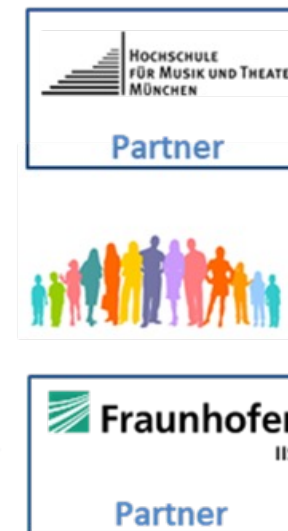
HFF  **CREATIF
CENTER**

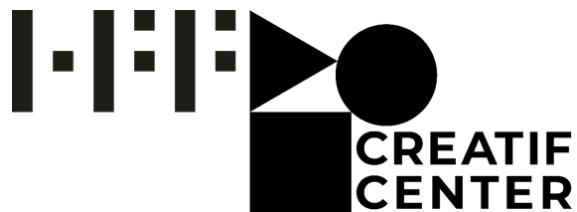


Industry / Research



Science / Society





myt Hochschule
für Musik und Theater
München

COOPERATION PARTNERS

Innovative
Hochschule



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HFF | F

HFF'S FILM HERITAGE



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- Digitization of analog films in our inventory
- Development of a future-proof digital film archive
- Implementation of a CPP Standard
- Development of a media center of archived films



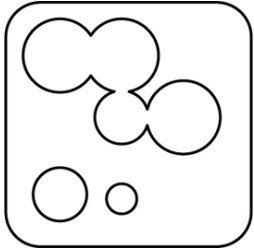
IPM

INTEGRATIVES PRODUKTIONSMANAGEMENT





- Adaption of workflows to new production conditions
- Virtual and cloud production
- Development of software and collab tools for film production



CIL

CREATIVE INNOVATION LAB



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CREATIVE INNOVATION LAB

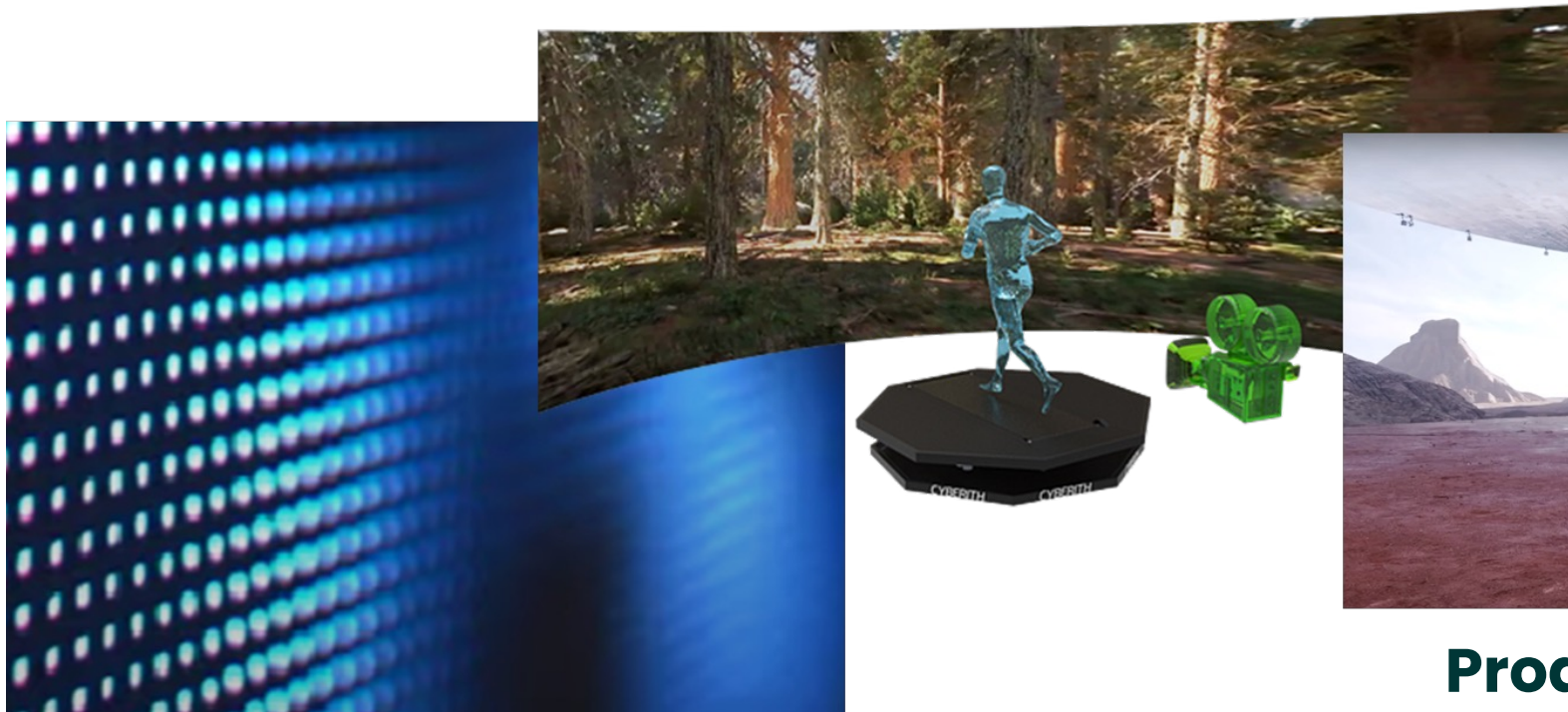


Laboratory for innovations in film technology

- Virtual Production (ICVFX)
- AI in production and post-production
- Volumetric recording and playback systems
- Transfer to film industry, teaching and research

Research at CIL

Scenic Research



Technical Research


Quellen

<https://www.cyberith.com/vidmill-video-production-treadmill/>

<https://www.starwarsnewsnet.com/2020/02/new-behind-the-scenes-video-of-the-mandalorians-virtual->

Production Operation

TECHNICAL RESEARCH

- 
- Testing the limits of what is technically possible
 - Technical knowledge base especially for HFF productions
 - Guidelines, also for technically demanding setups (such as HFR)

SZENIC RESEARCH



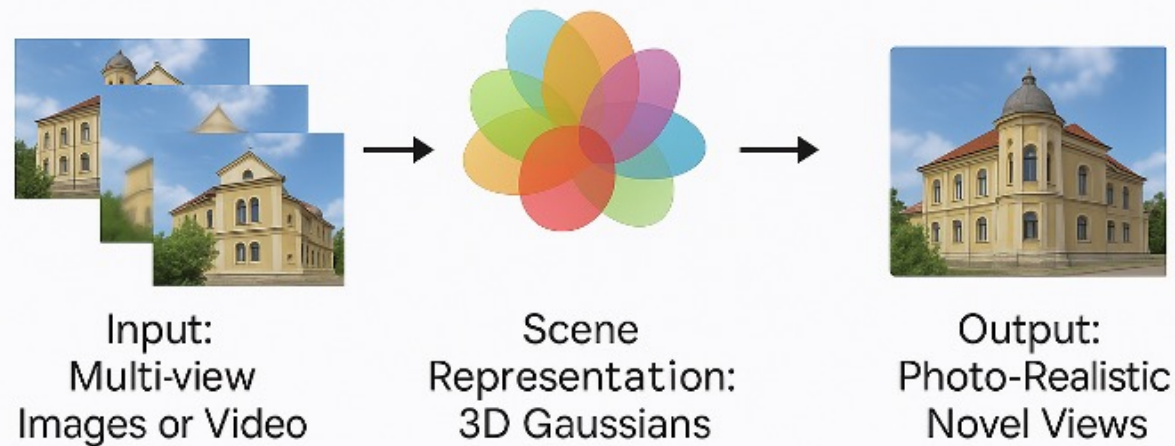
Exploring new creative possibilities

- Synchronization of movements with the LED background
- Transitions between the real and virtual world
- Photorealistic 3D-Reconstruction for Avatars and Environments

→ Creatively “pushing the boundaries”

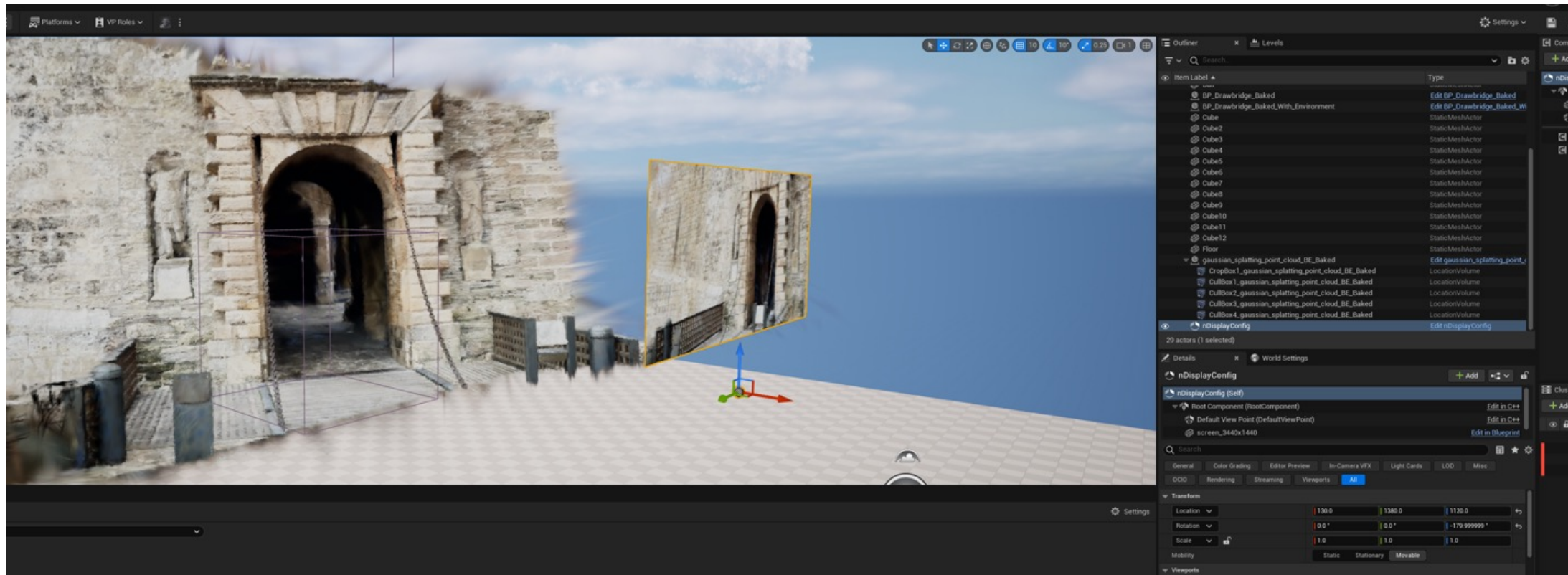
3D-Reconstruction

Gaussian Splatting

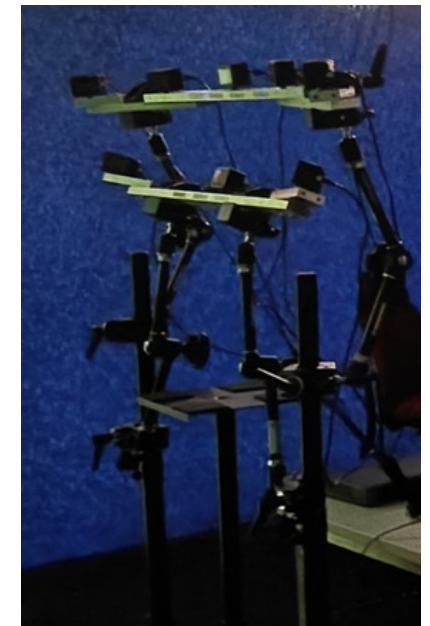


Originally proposed in 2023 by Kerbl et al. — “3D Gaussian Splatting for Real-Time Radiance Field Rendering”

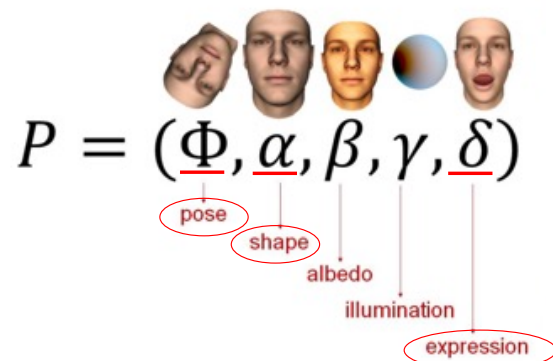
3D-Reconstruction



Nikolai Belevantsev – Fraunhofer IIS



Nikolai Belevantsev – Fraunhofer IIS



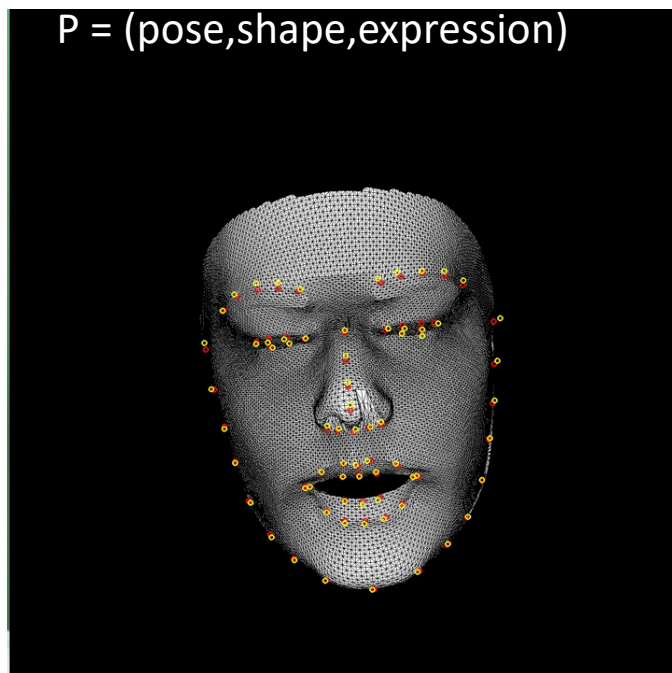
Avatare

Nikolai Belevantsev – Fraunhofer IIS



Avatare

Nikolai Belevantsev – Fraunhofer IIS



+

Original Capture



→

Gaussian Reconstruction



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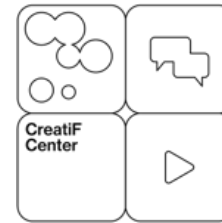
Let's keep in touch!



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Let's keep in touch!

 creatif@hff-muc.de



VIRTUAL PRODUCTION



- In Camera Visual Effects
- Real Time Rendering
- Color Management
- Digital Twins
- 3D World Generation
(e.g. NeRF, Gaussian Splats)

VIRTUAL PRODUCTION



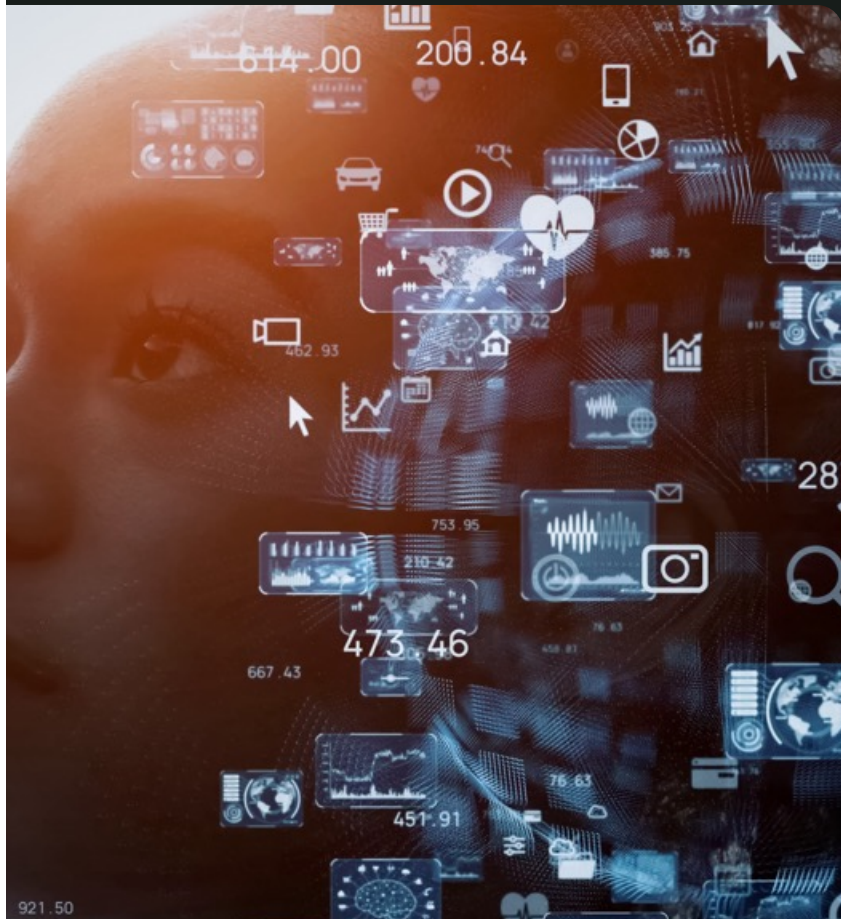
- In Camera Visual Effects
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- Color Management
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- 3D World Generation (e.g. NeRF)



MANDALORIAN
- Disney+ 2019

<https://lucept.com/2020/02/24/the-virtual-production-of-the-mandalorian/>

KÜNSTLICHE INTELLIGENZ

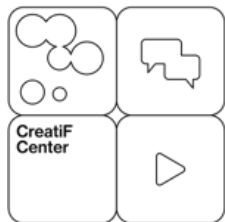


- Im kreativen Prozess
- In der Postproduktion
- Ethische und rechtliche Implikationen

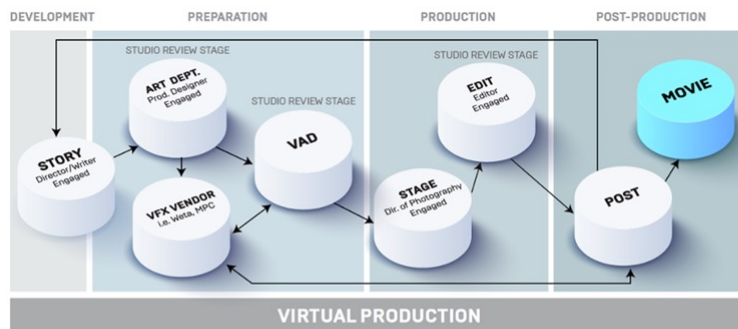
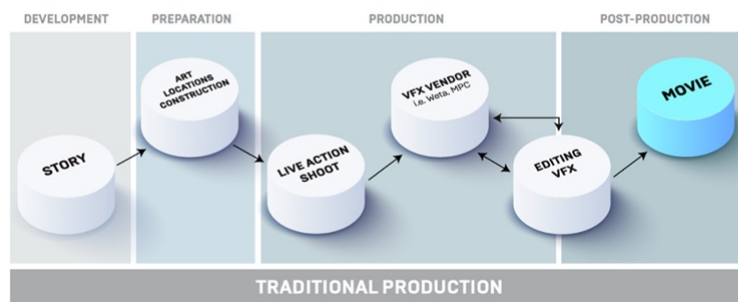
VOLUMETRISCHES VIDEO



- Neue Medienformen
- Volumetrische
Aufnahmeverfahren
- Volumetrische
Wiedergabeverfahren
- Nutzerakzeptanz

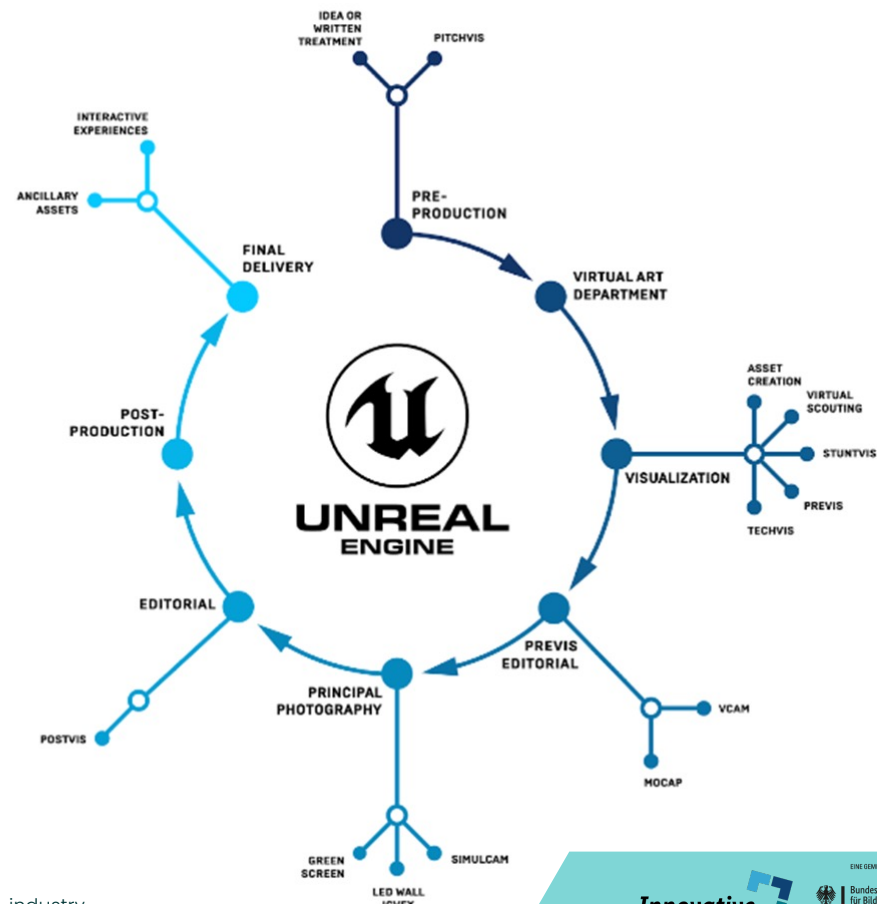


„FINAL PIXEL“ WORKFLOWS



Traditional vs. Virtual Production for Film

Visual development by Fox VFX Lab



Quellen

<https://amt-lab.org/blog/2020/10/virtual-production-an-introduction-to-its-use-in-the-entertainment-industry>
<https://dev.epicgames.com/community/learning/tutorials/xrJz/unreal-engine-techvis>

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TRANSFER



- Start-up advice
- Incubator
- Real-world laboratory