Virtual Lenses: Filming & Learning Through the Looking Glass

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Abstract— **This will be a zoom discussion & demonstration of a learning & technical workflow combined with a commentary on the possible implications for cinematography and virtual filmmaking. The workflow demonstrated is augmented reality technology and Wi-Fi to create a virtual camera which is able to look through and record a series of shots. This is *not* a new technique, however, the simplified accelerated workflow combined with an equivalent of an integrated visual effects and editing suite in addition to advances in real time raytracing presented an opportunity for students and faculty to accelerate and collaborate further.**

Keywords—
Virtual Production, Cinematography, Hand Held, Augmented Reality, Virtual Reality, Online Learning, Screen Casting

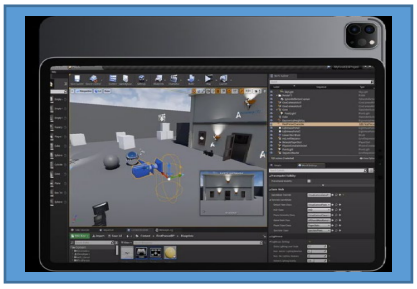

Fig. 1.iPad Pro, with Unreal Viewport

I. MAIN TOPIC: VIRUAL HANDHELD CINEMATOGRAPHY TUTORIAL

Accelerating technologies that combine VR/AR and Film plus the move to online teaching formats has accelerated the use of different recording technologies. In the past teaching how to create a Wi-Fi connection, combining augmented reality and SLAM algorithms with a set of controls for recording and customizing virtual camera controls with output to a visual effects and editing suite would have included multiple lectures and premium access to expensive software and hardware. This demonstration will discuss the implications of condensing information into referenceable video tutorial that is hosted on YouTube.

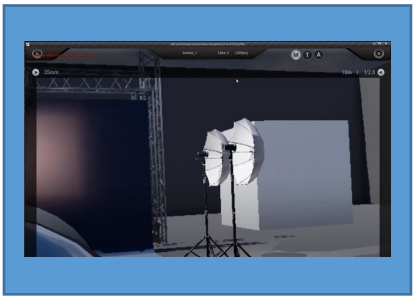

Fig 2. iPad Pro showing virtual camera

This research connects to additional research and video based and online training connected to the growing virtual production field. In addition to the technical steps presented a discussion of some of the ways information might be segmented for a curriculum that includes elements of a rapidly moving technological nature with elements of filmmaking and cinematography which have a rich set of conventions and some elements in between such as lighting and lenses.

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II. CONCLUSION

The emerging workflows of virtual production exemplify the accelerated and combined workflows of VR/AR and Film in addition to the greater move online teaching formats. These are accelerated the use of different recording technologies for both assistance as well as teaching. Like all teaching formats this has advantages and limitations. While from a micro focused standpoint this demonstration mainly examined efficiency of information construction, but it seeks to understand the place of greater recording technologies to the narrative and also pedagogical processes.

III. Acknowledgments

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Unreal, Epic Mega Grants

IV. References

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V. Media (if applicable)

https://www.youtube.com/watch?v=lG1AdI8DcAg