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Been Set Free: A Distributed Virtual Theatre Dance Performance

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A Distributed Virtual Theatre Dance Performance

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I. INTRODUCTION

For Frameless 2021, we present a fully realized example of virtual theatre. We define virtual theatre as a live theatrical performance, experienced on a stage in virtual reality, with participants in different physical locations (Geigel 2018).

For this performance, we present a dancing avatar, whose motions will be guided by a live performer outfitted with a full body motion capture system (Fig 1). Audience members will be able to watch the avatar perform on the virtual stage immersively using head mounted displays.

II. PHYSICAL SETUP

This Viewing stations equipped with Mixed Reality headsets for audience members will be set up in a classroom in MAGIC Spell Studio. Additional external audience stations will be be set up at the University of Rochester's Studio X1. The Studio X stations will not only provide the capabiliy for off campus vieiwng of the performance but will serve as a proof of concept of the remote, distributed nature of these kinds of performances.

The MAGIC Spell Studios sound stage (Fig 2) will serve as the physical performance space for the human dancer. The sound stage will be equipped with a large video wall which will be used to display the virtual auditorium from the perspective of the avatar on the

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Fig. 1. Live dancer using motion capture to control an avatar on the virtual stage.

virtual stage. Audience members will have their own "seat" in the virtual auditorium and will be represented by abstract futuristic heads which will move based on the head motion of the person viewing. This setup will place the live performer in the virtual environment and allow for interplay between the live performer in the physical space with audience members experiencing the performance in the virtual space.

The performance will last approximately 10 minutes leaving open the possibility of running the show twice during the symposium. The in-world experience will be closed captioned.

Keywords— *virtual theatre. Live performance, dance*

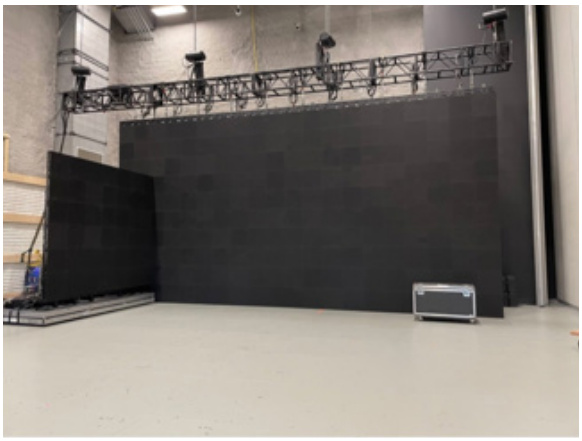

Fig. 2. Video wall on the MAGIC soundstage that will serve as dancer's physical performance space.

III. REFERENCES

Geigel, J. (2018), "Creating a theatrical experience on a virtual stage", Advances in Computer Entertainment Technology, pp. 713- 725, 2018.