Team Nerd Vision: Technological Innovations in the performance of
The Breath Of Stars

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Celebration of Scholars 2015: Exposition of Student & Faculty Research, Scholarship &Creativity

CARTHAGE COLLEGE

CELEBRATION OF SCHOLARS

Abstract

In 2014 Carthage Theatre was excited to collaborate with New York playwright Caridad Svich. Svich's plays are known for their intensive use of projections and other technological elements. In order to help support her play *The Breath of Stars*, the department offered a J-Term class in utilizing hitherto unused technologies to help tell the story. A team of five theatre, computer science, and CDM students and myself (Team Nerd Vision) worked through J-Term and all through February to craft video and audio effects for the play.

The process started with a thorough discussion of the play that took more than a week of meetings. We tackled complicated projection related problems using **Q Lab** to map video, created background images using **Sketchup** and **LightUp**, shot movies and altered them with **After Effects**, and even used live actor voices to trigger certain video effects with **VDMX5** and **Syphon**. We also collaborated with Academy Award Winner Professor Perry Kivolowitz who generously taught us how to use his image-morphing software; **Silhouette**. Lastly, we used **Facebook** to reinforce the social media-themed plot of the play, and allowed the audience to use **Twitter** live during the pre-show and project it for all to see.

"Through the use of video with the accompaniment of effects, we hope to portray the emotional pull that social media has on the characters and provide a mirror for the audience to realize the pull social media has in their lives as well." --Janina Spencer, Team Nerd Vision
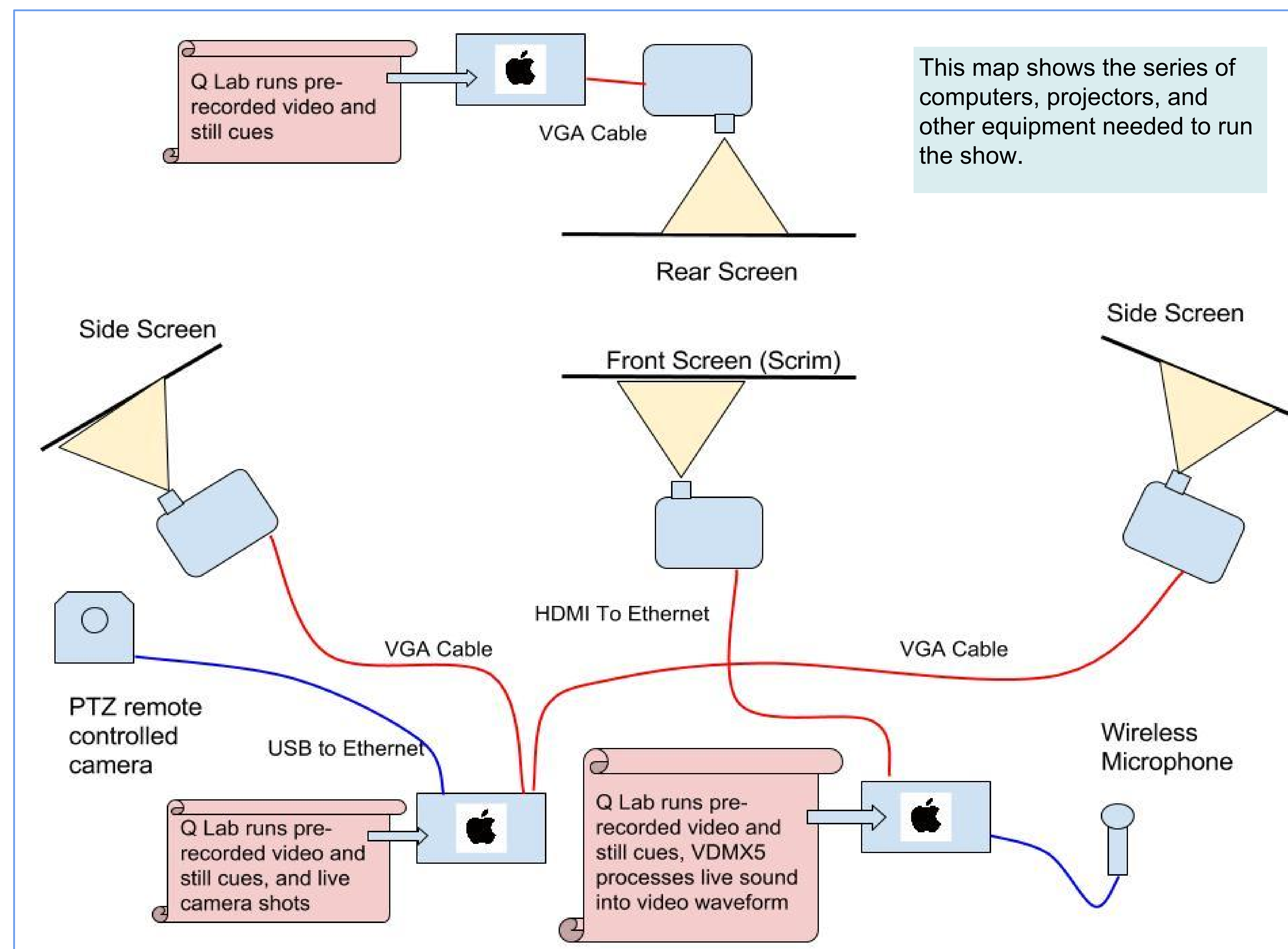

In this scene, an actor "materializes" behind a scrim image of a human form in binary, using **After Effects** to mask off a human form and play the video of the numbers inside it. (Photo: Lexie Peterson)

The central platform used a see-through scrim material at the front, and a rear-projection screen at the back, with separate projectors, for multi-layered effects. Here, video rose petals fall over live dancers in front of a projected dance hall backdrop, all controlled with **Q Lab**. (Photo: Lexie Peterson)
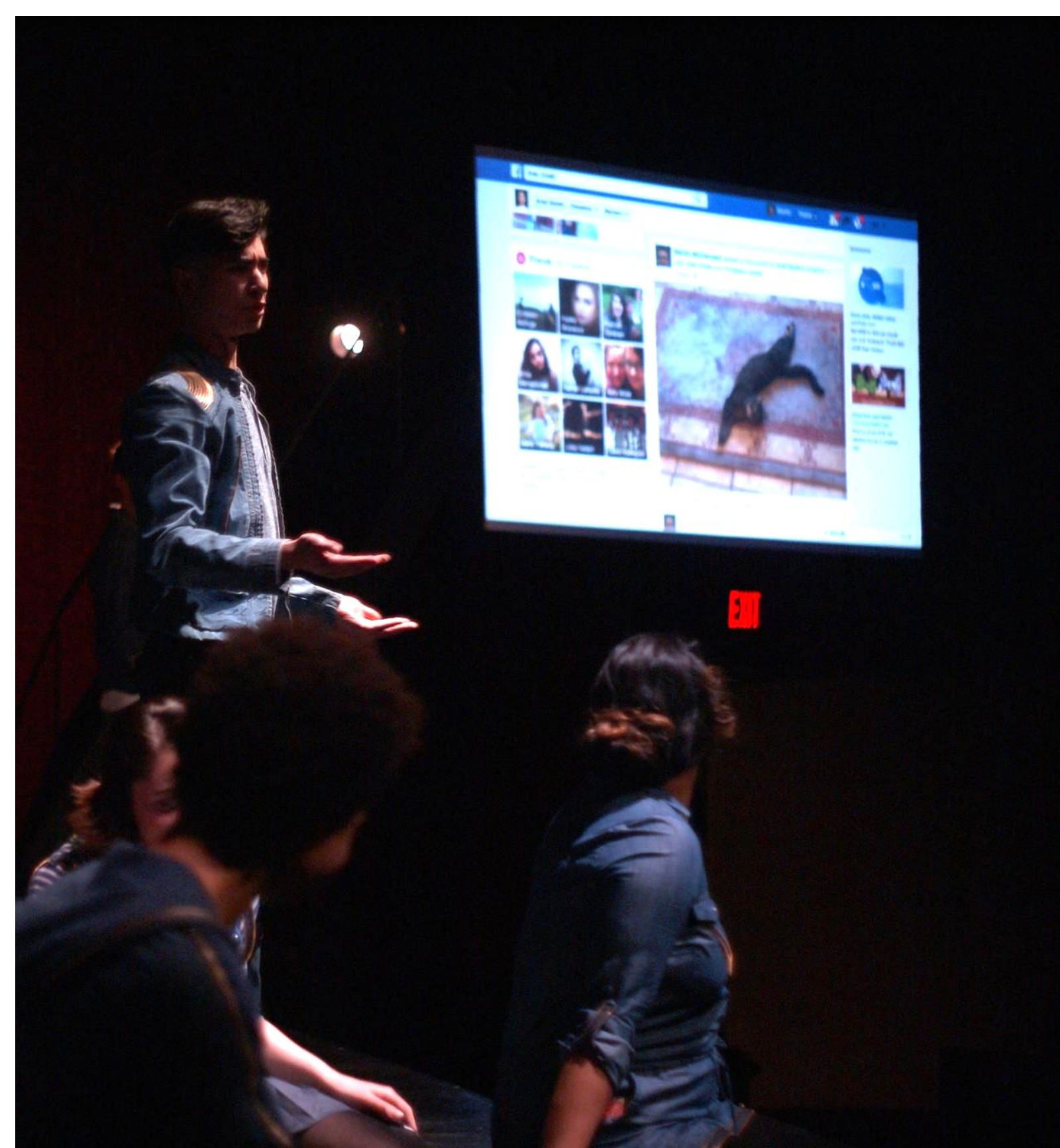
Two screens on either side of the stage displayed more video through **Q Lab** from other projectors, including Facebook posts and instant messages that were created for the show. (Photo: McClendon)

Q Lab runs pre-recorded video and still cues

VGA Cable

This map shows the series of computers, projectors, and other equipment needed to run the show.

Rear Screen

Side Screen

Front Screen (Scrim)

Side Screen

HDMI To Ethernet

VGA Cable

VGA Cable

PTZ remote controlled camera

USB to Ethernet

Wireless Microphone

Q Lab runs pre-recorded video and still cues, and live camera shots

Q Lab runs pre-recorded video and still cues, VDMX5 processes live sound into video waveform

Screenshot of the early stages of the face morphing process using **Silhouette** software by Carthage Professor Perry Kivolowitz. Professor Kivolowitz pioneered the morphing techniques currently used in all major Hollywood films.

"Understanding how capable we are of creating effects and projections is important for *Breath of Stars*, not to limit our creativity in the process, but to understand how to incorporate and balance our usage of technology and the traditional theatrical methods used in order to create something spectacular and to transition the theatrical art here at Carthage into a more modern day. This is important for efficiency, as well as to appeal to a new generation of theater goers. Creating a live movie, a movie on the stage, by using the same tools as those used in Hollywood is something that is more and more rewarding the deeper into it we get. *Breath of Stars* is all about balancing the technological, the cyber, the newer world, with the old one." --Samuel Santiago, Team Nerd Vision