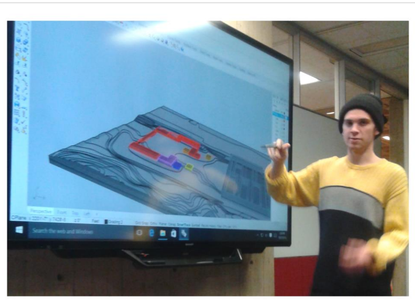
Rensselaer

why not change the world?®

2017 Teaching and Learning Collaboratory (TLC) Seed Proposal Winners

Nonlinear Learning: Teaching Musical Composition, Performance and Creative Coding

Rob Hamilton (ARTS), Curtis Bahn (ARTS)



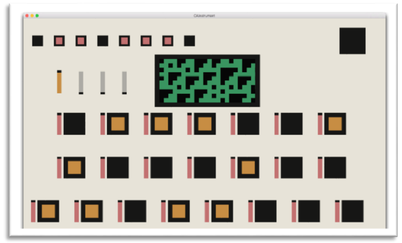
This initiative will develop a pedagogical framework for architectural visualization that will:

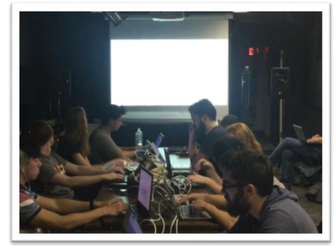
- Instruct students to communicate using interactive media, digital overlays and story boarding techniques.
- Increase student engagement in the classroom through interactive technology.
- Develop workflows for sharing 3d designs in real time.
- Deliver instructional content through screen sharing in the classroom.
- Develop new teaching methods to foster collaboration through the use of the smartboard in the design studio setting.

Touch screen technology allows the user to actually move your hand(s) across the screen to place the audience within an architectural space. Cities and buildings, can be enlarged, and viewed from many angles while allowing students and the instructor to isolate design problems, and draw alternatives on the screen in a group setting.
BArch candidate: Jackson Wright

Interactive Pedagogy: Hands on in the Digital classroom

Rhett Russo (ARCH)





Resources provided by Rensselaer's Teaching and Learning Collaboratory initiative will fund the development and implementation of a new hardware and software-based platform for the Ensemble Nonlinear, an existing course and performance ensemble providing a technological learning environment for computer-based music, creative coding and arts-focused computer science.

REACH: Remote Engineering Ambassadors Channel

Ken Connor, Elizabeth Herkenham

- Since 2011, RPI undergrad EAs have helped 30k students (grades 4-12) learn how Engineering can solve society's grand challenges.
- The current EA program is geographically limited because of person-to-person delivery.
- REACH will enable students anywhere to participate in the EA experience using remote delivery with the involvement of local & remote partners.

LESA
Lighting Enabled Systems & Applications

Metaliteracy Augmented Reality Quest (MARQ): A transformational, collaborative, mixed reality project to enhance physical and virtual information gathering skills for a more informed citizenry

Lillian Spina-Caza (C&M), Rebecca Kane Rouse (C&M), Andrew White (Folsom Library), Jenna Pitera (Outreach & Prof. Studies) & Robb Lauzon (RA, PhD Candidate, C&M)

Project goals:

I. To teach students how to conduct quality research by:
   - Identifying
   - Finding
   - Evaluating
   - Applying &
   - Acknowledging sources

II. To produce a mobile app through participatory design with RPI students, taking advantage of AR's ability to layer digital information in physical spaces to create meaningful, performative, and transformational learning experiences in Folsom library using a multiplayer mixed reality game environment.