*Viro*: The Future of Online Learning Interfaces

Delaram Moghaddam<sup>1</sup>, Rawda Hamid<sup>2</sup>, and Trien Nguyen<sup>3</sup>

<sup>1</sup>Department of Design and Technology, Purdue School of Engineering and Technology; <sup>2</sup>Department of Design and Technology, Purdue School of Engineering and Technology; <sup>3</sup>Department of Physics, Purdue School of Science

The need for a virtual classroom in which the professor and students can discuss and interact in real time is a paramount consideration regarding the future of online learning. The pervasive nature of online coursework has exposed deficiencies in monitoring the integrity of the student work and maintaining a student to instructor connection similar to live classes. The purpose of this project is to address these deficiencies by developing, Viro, a more realistic virtual classroom. Viro is designed to address the most common deficiencies citied by educators and students in past studies of currently available online education platforms: identification, work sharing, timely communication, and customization. Viro will provide authenticated attendance using identification provided by a school's current authentication and authorization systems, application and screen sharing, where the professor or student may share their computer screens in order to provide examples or receive immediate feedback, group and individual messaging that allows the professor to address questions to an individual or the entire class, and a development platform allowing customization of the Viro to meet an instructor's requirements. With an emphasis on education, the Viro's design incorporates images and graphics that are commonly associated with learning, such as binders, folders, and bulletin boards, creating a familiar interface that mimics classroom and study environments. These aesthetics not only contribute to Viro's design, but also play a part in it being easily understandable by a large number of users. The arrangements of its different components work in line with its pages' aesthetics to progress towards a future of ideal online education. After a functional prototype of *Viro* is created, testing by larger numbers of students and educators will commence in phases.

Mentors: David Goodman, Department of Engineering Technology, Purdue School of Engineering and Technology, IUPUI; Alan Mikesky, Department of Kinesiology, IU School of Physical Education and Tourism Management, IUPUI; Joe Tabas, Department of Biomedical Engineering Technology, Purdue School of Engineering and Technology, IUPUI