User-Centric Interactive Collaboration Software (UCICS)

Naeem Tai¹, Chris Sergio¹, Kenny Cook², Kareem Rimawi², James Hill¹, Chris Rogers², Clayton Nicholas³

¹Department of Computer and Information Science, IUPUI School of Science; ²Department of Computer Graphics Technology, Purdue School of Engineering and Technology; ³Office of the Vice Chancellor for Research, IUPUI

The problem of collaboration exists among businesses across all sectors. Teams often face collaboration challenges as a result of lack of communication, lack of appropriate collaboration tools that meet the needs, or over complexity of using collaboration tools. We attempt to solve this problem by User-Centric Interactive Collaboration Software (UCICS). The purpose of UCICS is to develop a framework that connects currently available collaboration tools, while providing a customizable user interface for viewing the data stored in those tools. Through interviews and discussions with our customer group at the Herman B Wells Center for Pediatric Research, we have determined that this need exists across the labs in the Herman B Wells Center and IU School of Medicine. As a proof of concept prototype, we are developing a system that will allow researchers to share their mice inventory with other labs with no additional work than they are already doing to manage their mice inventory. This system has potential to save great amount of time and money for the researchers. Furthermore we plan to extend UCICS to allow researchers from different labs to collaborate and share common experiment data. Moving forward we envision USICS to be able to solve collaboration problems across all disciplines by integrating variety of tools into the framework.

Mentors: James Hill, Department of Computer and Information Science, IUPUI School of Science; Chris Rogers, Department of Computer Graphics Technology, Purdue School of Engineering and Technology; Advisors: Clayton Nicholas, Office of the Vice Chancellor for Research, IUPUI; Karen White, Office of the Vice Chancellor for Research, IUPUI
JagWaRz Junior: Cyber Security Education for Young Adolescents

Jasmine Herbert, Rushabh Vyas, Connie Justice, Vicky Smith
Department of Computer Information and Graphics Technology, Purdue School of Engineering and Technology

Currently there are few methodologies for introducing cyber security to young adolescents. This area of research will examine the importance of teaching cyber security at an early age as well as the significance of introducing cyber security through the use of digital game based learning. Within this study, cyber security will be taught to a sample of young adolescents through the use of a capture the flag style game, JagWaRz Junior. The effectiveness of JagWaRz Junior will be quantitatively measured through a pretest and posttest presented to the participants. Overall, this game will encompass ways to handle many of the risks that come with Internet usage at an early age. These risks include but are not limited to cyber bullying, pornography, online predators, personal privacy, and password protection. The results of this study will contribute to our understanding of the effectiveness of digital game based pedagogic learning.

Mentors: Connie Justice, Vicky Smith, Department of Computer Information & Graphics Technology, Purdue School of Engineering and Technology, IUPUI, Indianapolis, IN
The Neighborhood Development Team worked to address the public problem of payday loans in Central Indiana. The economic disadvantaged in Indianapolis commonly utilize payday loans. Payday loans average $300-$400 at 390% interest. An average payday loan customer will take out nine loans in a given year. Research stated that borrowers generate 90% of the payday lending business with five or more loans per year the problem is that borrowers have an issue repaying loans within a limited period due to these high interest rates and are in need of another loan to pay back the original loan. Our model provides the same loans as the payday loans but at a much smaller, 36%, interest rate for a longer duration, thirty days instead of fourteen days. Our loans will also contribute to the borrower’s credit score. The greater goal is economic empowerment.

**Mentors:** John Clark, IU School of Public and Environmental Affairs, IUPUI; Richard Ward, Anthropology, IU School of Liberal Arts, IUPUI; and Karen White, Office of the Vice Chancellor for Research, IUPUI