



OOYAVAH

Sheridan and Humber: a Three-Dimensional Partnership

Humber College instructor Odin Cappello walked into the lab of Sheridan's Centre for Advanced Manufacturing and Design Technologies (CAMDT) and was amazed.

"They've got a lot of cool machinery that we don't have at Humber," he said. "It was eye-opening, and maybe there was a little envy," he added, laughing.

But this was no tour. This was business.

Odin, a professor at Humber College's Industrial Design Department, was taking part in his first collaboration with Sheridan, made possible by the Ontario Centres of Excellence through its Voucher for Innovation and Productivity program. "I hadn't had any previous experience with Sheridan, so I didn't know what to expect," Odin confessed.

Odin and students from Humber's Industrial Design, Multimedia Design and Development, and Film and Television Production programs

were working on an exciting new technology with Toronto-based start-up OOOYAVAH.

They were developing a new iPad application and special screen that would allow a user to view in 3D without having to use 3D glasses, while still maintaining the touch screen navigation.

The technology comes in three parts – a specialized iPad app, a case that the iPad slides into, and a clear plastic lens that slides over the iPad's screen for 3D viewing.

This technology has so much potential. The pharmaceutical, medical and engineering industries are rubbing their hands eager to use it. Giving demonstrations at a molecular level, or anatomical level in 3D, or demonstrating machinery, tools, or architectural designs in multiple dimensions has obvious benefits. OOOYAVAH and Humber had developed the app, and then began designing the supporting case and lens.

Unsure of what the physical case would look like, the students moved through the design stages, from concept, to concept development, to initial prototyping, evaluation, and then further prototyping.

But they needed to physically test and evaluate whether their design was going to work. They needed a 3D printer to accurately print their model to determine whether or not it was going to be feasible.

Working with Dr. Farzad Rayegani, Director of the Centre for Advanced Manufacturing and Design Technologies within Sheridan's Faculty of Applied Science and Technology, Humber's team enjoyed a crash course in 3D printing, or additive manufacturing, as it is also known.

Several design modifications were made until the two colleges created a demonstrable prototype that OYOVAH can now shop around to potential manufacturers. It's lightweight, easy to use and ergonomically sound. The lens produces bright colours and a strong 3D image. (The lens can also be conveniently stored when not in use.)

OYOVAH hopes to find a manufacturer and have the technology market-ready in 2015.

"This was an incredibly positive experience," said Odin. "As any industrial or commercial partnership goes, this was very smooth. Sheridan was super accommodating and I hope to work with them again. Obviously for both colleges the mission really is education and integration with

industry, so it was also very hands-on and very fostering for students," he added.

"It was great working with Humber," said Farzad. "They wanted to learn and they were very approachable...for them additive manufacturing was a new area and they loved learning how to do it."

"Obviously, for both colleges the mission really is education and integration with industry, so it was also very hands-on and very fostering for students," - Odin Cappello, Professor, Industrial Design, Humber

For Farzad, this collaboration bolsters CAMDT's reputation as a technology hub for 3D printing, advanced manufacturing and robotics and automation. Further proof can be found in Farzad's calendar, which is filled with meetings with universities, colleges and companies from across Canada wanting to tap into Sheridan's expertise and resources.

"This technology hub is a playground for all stakeholders to come together in a risk-free environment to put together their minds and share expertise," said Farzad. In this playground, Sheridan, Humber and OYOVAH have created an amazing new 3D experience.

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