

# NEWS RELEASE

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## BCIT launches The CUBE: Centre for the use of 3D simulation technology that takes teaching and learning to a new level

Revolutionary technology will allow students to manipulate virtual objects from knee joints to jet engines

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**BURNABY, BC:** It will transform the way instructors teach and the way students learn at BCIT. It will bring the workplace into the classroom and enrich curriculum – virtually.

Unique to BCIT, the CUBE initiative will place 3D simulations of expensive, rare and modern equipment in the hands of every BCIT student, anytime, anywhere. This will allow learners to explore complex components, systems and concepts in a 3D virtual world before they touch the real thing. They will be able to manipulate virtual objects from rail cars to knee joints, explore an aircraft engine and its internal components, and even disassemble, assemble, and cross-section it using laptops, tablets, and other new communication devices.

With a US\$1million grant from Lockheed Martin and \$380,000 in software contributions from NGRAIN (Canada) Corporation, BCIT is launching The CUBE. This visionary two-year initiative will move the institution's learning and teaching to a new level through the development of NGRAIN interactive 3D simulations that will enrich curriculum and enhance many elements of the learner experience.

"Over the next two years, we expect 3D simulation instruction to become mainstream at BCIT," says Chris Golding, vice president of Learning and Technology Services at BCIT. "It will provide the Institution with the ability to meet the changing expectations of the new generation of learners who are digitally connected and who view 3D virtual learning environments as natural extensions to their education."

"By delivering 3D-enabled course materials directly to instructor and student laptops, knowledge can be delivered in the context of what the student is doing and seeing at that very moment. It's a valuable supplement to the instructions our students are receiving from our faculty in classrooms, shops and labs", he added.

For some time we have seen widespread use of 3D visuals in the gaming sector but perhaps 3D technology's most significant use will be in education.

"Canada is rich in innovation and research," says Wendi Goodwin, Lockheed Martin. "As the designer and developer of the world's most advanced aircraft, we are constantly looking for technologies that will maintain us as the industry leader."

3D simulations can be used to place students into a rich variety of virtual workplace scenarios, helping them become adept problem solvers, allowing for unlimited practice on the specific tasks students find most challenging when learning a new skill. This level of interaction and accessibility is a key ingredient in preparing students for hands-on, lab or shop-floor exercises.

"NGRAIN is pleased to collaborate with Lockheed Martin in support of BCIT in the advancement of 3D simulation for technical training," said Paul Lindahl, CEO, NGRAIN. "NGRAIN software—in use by Lockheed Martin and other leading aerospace companies—has been proven time and again to accelerate learning and boost technician performance. We are excited, with the CUBE, to see NGRAIN applied within a higher education environment, transforming technician training."

Long before BCIT graduates become valued employees, the CUBE will allow them ample access to both virtual and real tools, making them skilled practitioners capable of addressing a broad range of situations that might arise in the real workplace.

"What we're trying to do for the first time is replicate reality on a laptop, a mobile device or in the classroom which is perhaps better described as replacement (or "alternative") reality rather than virtual reality," says Brian Hosier, director of the Learning and Teaching Centre at BCIT. "Our students are coming to BCIT thinking that a digital world is in fact "real"."

The CUBE's development of 3D simulations and learning objects supports BCIT's strategic initiative to implement sustainable practices in the learning environment. A reduced carbon-footprint but a higher level of access to critical training resources provides a win-win for the student and the environment.