On March 7, 2007, Toblo won the Independent Game Festival’s Best Student Game award at this year’s Game Developers Conference (GDC). A team of five DigiPen students developed the game during their junior year. Steve Chiavelli wrote the networking and menu code for Toblo and served as the team’s Testing Manager. John Jensen was the project’s Technical Director, and he developed the rigid body physics engine powering the gameplay. Brad Rasmussen developed the AI for Toblo, and he provided much of the artwork. Ben Smith created the graphics engine and the special effects for the game. Zach Peterson produced the game and was the lead gameplay developer. After receiving the award, Steve said, “Being recognized as the best student game out of more than 100 entries is an amazing feeling. It really puts all the hard work into perspective.”

Although brief, this interaction with such a well-known personality in the game industry made an impression on the Toblo development team. DigiPen students made another type of impression at the GDC, and it has captured the interest of the Internet and video game community. After accepting the award for Toblo, Steve Chiavelli took the opportunity of being onstage to propose to fellow DigiPen student Brittany Aubert. “Even though I had planned the proposal ahead of time,” Steve admitted, “I was ridiculously nervous when we were walking towards the stage. When I bought the ring, I had no idea that Gamespot was going to be recording the ceremony and putting it up on the Internet for all to see.” To the audience’s pleasure – and even more so for Steve – Brittany accepted his marriage proposal. All told, it was a successful and exciting time for DigiPen at this year’s GDC.
As many DigiPen students have already experienced, Dr. Rania Hussein values making available to her students a wide spectrum of learning opportunities. For example, she has organized the Computer Science Colloquium Series that invites professionals to come to DigiPen as guest speakers. Dr. Sing Bing Kang of Microsoft Research was one colloquium speaker, and he spoke to students and faculty in February about how images and videos can be used to produce photorealistic effects. Dr. Hussein has teamed up with Dr. Kang and Dr. Charles Duba in a research project geared at promoting research at DigiPen. For this first round, they chose “three outstanding and highly motivated students,” Dr. Hussein said. “This project will give them the opportunity to relate what they learn to real-world applications and to interact with industry professionals, thus promoting their research aptitude and enriching their learning experience at DigiPen.”

This research group comes from Dr. Hussein’s broader efforts at promoting opportunities for students to turn their course projects into conference presentations and publications in professional, peer-reviewed journals. As part of these efforts, Dr. Hussein and Dr. Michael Aristidou co-founded an undergraduate research group. “I was very pleased when a group of DigiPen students got their CS 370 project published recently at the International Symposium on Intelligence Techniques in Computer Games and Simulations,” Dr. Hussein said. One of the students, Chance Lyon, a senior in the RTIS program, even traveled to Japan in early March to present the paper at the symposium held at Ritsumeikan University in Shiga.

Dr. Hussein firmly grounds her efforts at promoting student research opportunities in her teaching philosophy. She believes that teaching students how to learn is the most important lesson to help students grow confident in their abilities to study independently and to challenge themselves in exploring new ideas. She feels, “My goal is to challenge my students to learn quickly, to question what is presented to them, and to search for information beyond what is presented in class.” As a professor, her objectives are to teach fundamental concepts, to foster critical thinking, to facilitate acquisition of life-long learning skills, and to develop problem-solving strategies. Reflecting sound pedagogical principles, Dr. Hussein starts her courses by establishing an appropriate learning environment. “I try to establish an excellent rapport with my students by learning their names, by knowing a large percentage of them on a personal level, by being approachable, cheerful, and helpful, and by listening to their needs. The result is that students are more open to discussing their ideas or concerns, to striving for excellence, and to seeking help when they need it.” In her efforts to facilitate her students’ learning experience, Dr. Hussein is among the first instructors to use DigiPen’s distance learning system (Moodle) to facilitate the communication between her and her students.

Dr. Hussein also cares greatly about increasing the retention rate as well as promoting women and minorities in the science and engineering fields. Studies reveal that the participation and persistence rates in these fields are dramatically lower than other fields. Dr. Hussein feels that this is due to “the perception that science and engineering courses are difficult to understand and require a massive amount of intellect, which may be intimidating. Accordingly, I feel the responsibility of making students appreciate this field and feel confident in their capabilities.”

Dr. Hussein’s educational background gives her versatility in both academia and the industry. She holds a Ph.D. in Electrical Engineering and a Master’s degree in Computer Science from Old Dominion University, Virginia, and a Bachelor’s degree in Computer Engineering from the Arab Academy for Science and Technology in Egypt. Before coming to DigiPen this last August as an Assistant Professor for the CE and CS departments, she accrued five years of experience teaching computer engineering and computer science courses such as digital logic design, C++ programming, and Artificial Intelligence. Dr. Hussein’s research interests are computer vision, image processing, and pattern recognition. She has co-authored several papers; the most recent one was published in the conference proceedings for the 15th International Conference in Central Europe on Computer Graphics, Visualization, and Computer Vision earlier this year. As her actions with DigiPen students demonstrate, Dr. Hussein enjoys teaching. “I chose this career because I have a strong passion for teaching. I enjoy interacting with students, facilitating their learning experience, and motivating them to strive for excellence,” she explains. DigiPen students have gained much from this dedicated and motivated professor.
GAT 310, Introduction to Game Level Design I, is DigiPen’s first course specifically devoted to level design for PC video games. Level design is the action of creating architectural areas that include puzzles and objectives that have an overall theme or objective that a player must overcome in order to achieve success. Game developers then incorporate these areas into a video game, and they become the places that challenge players and create the suspension of disbelief that keeps them immersed in the entertainment the designer has crafted. But as one student noted, “This class really goes beyond simply addressing matters of level design per se. It also attempts to broaden our skill sets, both technically and theoretically, in level creation and level implementation.”

Teams that develop video games use level design tools to lay out the physical design of the areas in which the players interact. After designing these areas, the team develops and integrates throughout the game increasingly difficult puzzles in order to create an enjoyable experience for the gamer. However, this mechanical-sounding process requires hours of balancing and tuning in order to make the overall experience not only fun but also at just the right level of frustration so that the player feels compelled to want to complete the level the designer has created. For the purposes of this course, the curriculum focuses on first-person shooter (FPS) style games because they serve as an excellent opportunity to introduce some of the initial level design concepts and to build student skills with the basic tools and techniques that carry over into other genres of games. Students found that the course gave them the opportunity to focus in an area of their choice by allowing them to expand their studies beyond the confines of the syllabus.

GAT 310 was created as the first “hybrid” course to act as a bridge between BFA and RTIS students. This course allows both programmers and artists to earn credits working in a collaborative environment and focusing on bringing their strengths to bear on the creation of functional levels. Composed of artists and programmers, the team first determines the scenario they will create. From this initial discussion, the artists sketch storyboards of the overall architectural layout of the area that will be the setting for the level. Using these storyboards, the programmers use the level design tools to construct the wireframe models of the structures. While this is going on, the artists create the models of the creatures that will inhabit the level. Once the creatures are created, the programmers insert the creatures into the environment and attach behaviors to them as determined by the design that has been developed. While this is being done, the artists develop and apply the textures and skins for the models and buildings. As Kamal Siegel, one student in the course, learned, “Being a team player is crucial to your success in this course, just as it will be in the real world.”

But this is only the beginning. After this, the actual work of play testing, balancing, and tuning begins, which takes about 50% of the time in the course. Through this experience, students learn not only the importance of interpersonal communication, but also the importance of pre-production planning and how a solid foundation in tools and techniques allows for design teams to realize their goals. This course is not for everyone, but for those individuals interested in becoming technicians in the level design community. It especially caters to the kind of student who likes doing a little bit of everything. GAT 310 serves as a valuable starting point and experience for working in a supervised environment where communication between artists and programmers is critical.

- Chris Erhardt, professor

Career Services Report on GDC

The Game Developers Conference (GDC) 2007 was the largest GDC ever. DigiPen attended for the fifth time and had a booth on the expo floor. DigiPen representatives spoke with employers from around the world, potential students, DigiPen alumni, and other individuals involved in the game industry. Dozens of current students attended this event as it coincided with our Spring Break. Attendees experienced the breadth and scope of this growing industry via the expo displays.

One highlight of the GDC was the annual alumni reception. This year, Jason Chu and other faculty and staff held a dinner for alumni at a local San Francisco restaurant. Twenty-eight alumni ranging from the classes of 1999 to 2005 were in attendance, and they shared stories of their time at DigiPen and their lives as game developers.

GDC is an ideal opportunity for upperclassmen and graduate students to interact with hiring managers and technical and art leads. This year’s Career Pavilion featured dozens of international companies hiring for all positions. While many of the posted positions are for senior positions, many companies accept applications for entry-level positions and internships. DigiPen students came prepared with updated resumes; portfolios; websites with sample art and code; 30-second “elevator pitches” that introduce themselves and outline their interests, accomplishments, and aspirations; career paths; and knowledge of the companies and their products in which they are most interested. Since hundreds of job seekers attend the GDC, students should follow-up with a thank-you email to the Human Resources staff or whomever they spoke to at the GDC. While the large number of people searching for work may have appeared intimidating for some, students who were prepared with strong resumes and who expressed enthusiasm and knowledge for the game development process had a successful GDC experience.

Gordon Dutrisac, Student Services Director
I have had the honor of running the Student Association this year. A lot has happened. We have thrown successful school-wide events, which met our early goal of trying to bring together all members from every class. We have opened new avenues of discussion as well as strengthened existing ones with the faculty and staff, which accomplished the task of creating better information flow to the students. We have created a working relationship with the fine people in IT, which has allowed us to quickly bring up and resolve student concerns. Finally, and most importantly, we have achieved some respect from the student body by being open and honest and working hard at our jobs. That is a pretty cool list, and I am proud that I got to see that much change happen. But these accomplishments do not mean that the Student Association’s tasks are complete and that we can just sit back. Due to the increasing number of student enrollments every year, very soon we are going to be a school spread over two buildings. If it does not happen next year, it will most likely happen the following year, and that issue alone will be big. How will the SA be able to represent two buildings? How can we keep the relationships we have with faculty and staff? How will students be able to interact with each other? I cannot give you answers to these questions, but I have complete faith that the group that steps up next year will be able to handle these issues and more. We had amazing personnel in the SA this year, and I know it will only get better.

No matter how great and motivated the people in the SA are, things cannot continue to get better without you. This is now my final call to arms to the student body. Make sure to attend at least one open forum next year; go to the events sponsored by the SA; when you have a concern or question, be sure to ask your representative; and if you think you can contribute or want to do a better job, then run for a position in the SA.

It has been a pleasure to lead the Student Association this year, and I thank you all for supporting us throughout the year.

Zach Peterson, SA President

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Student Association Corner

Peter Kugler RTIS/Senior

In a dentist’s waiting room about a decade ago, the magazine Peter Kugler perused while waiting patiently for the joys of his biannual teeth cleaning fell open to a short article about how two-dimensional video games would improve as pixel resolution got better. More importantly, the article discussed how DigiPen, then located in Canada, would teach students how to use this new technology to make better video games. But minutes later, the high-pitched whirring of the cleaning brush and the gum-yanking flossing action chased away the lure of a new school in far away British Columbia.

After that nearly fateful moment in the waiting room, Peter attended and graduated from James Madison University in Virginia, where he met his future wife, Angela. Upon graduation, Peter took a job teaching history in southern Virginia. Soon after, he entered a Master’s program at George Mason University while teaching students with disabilities. Peter and Angela married, and then moved to Jackson, Wyoming, where he taught at a local alternative school. It was in Jackson where he decided to make a career change. As he helped a counselor friend research schools for graduating high school students, memories of the school he had heard about in an article he had read in his dentist’s waiting room returned. Peter applied to DigiPen and was accepted.

Peter has enjoyed his DigiPen experience and thrived in the RTIS degree program. He has met some “brilliant” peers and faculty who have made lasting impressions on him. Most importantly, he appreciates the skills he has gained through the program since they have increased his self-confidence and helped him understand how to create what he imagines. “In the past, I only dreamed of making things come to life,” he remembers. “Now, I feel like I have a magic paintbrush with the compiler as my palette. It is quite empowering!”

When he started the RTIS program, Peter—a glutton for punishment—took a job teaching night classes at Bellevue Community College while his wife started working as a receptionist at DigiPen. A year later, he began working at Tillicum Middle School where he has taught a variety of classes for the last several years. He especially enjoys teaching about technology. “Students are really interested in learning about technology, and it is always rewarding to see the creativity they pour into their class projects.” Peter also spent a summer working as an engineering intern on Call of Duty 3 in Santa Monica, California. However, he recommends that DigiPen students not work during the academic year unless they have to. “While my jobs helped me limit the debt that I would have acquired through student loans, I think in many ways it limited the amount of knowledge that I could have gained had I been able to concentrate only on my studies,” he admits.

Peter is now completing his fourth and final year of study at DigiPen. After graduation, he will begin working at Microsoft Game Studios as a Software Engineer in Test. The intelligence, friendliness, and modesty of the Microsoft team impressed him during the interview, and he looks forward to the new challenges he will experience. He also hopes to resume some of his former pleasures in life, like running, skiing, biking, and playing adventure games. With his “dream job” in his pocket, Peter is correct when he concludes, “All of my hard work at DigiPen has paid off!”

Photo: Katrina Chu

A Peter relaxes with his wife Angela in Oahu last August.