Just released this fall, Portal, one of Valve’s newest games, has caught the attention of the gaming world. Critics have hailed Portal as one of the most innovative new games this year. What makes Portal special to the DigiPen community is that it was developed and created by a team of alumni from the Institute. Prior to their senior year, a team of DigiPen students fleshed out the portal concept. The idea for their game was to use connected teleportation portals to move objects in a level so as to solve some physics-based puzzles. The player would jump in one portal and pop out through the other in some other area of the level, or the player could push something into the portal that could then be used to solve a puzzle in the connected area. The player was free to place the portals on any flat surface.

In Mike Moore’s GAM 400 course, they developed the prototype of the portal system. “When the team first pitched their idea to me, I thought it sounded exciting, although I was a bit skeptical as to whether the portal system would work the way they wanted it to,” Mr. Moore recalls. He encouraged them to create a working prototype as quickly as possible to test whether or not the system would work. “It was a lot of fun to see them tackle the problem, and I felt completely confident that they would be able to pull off the concept,” he says. Mr. Moore was also impressed with the way that the team worked with Dr. Charles Duba to craft realistic physics simulations for their game. This project turned into the student game Narbacular Drop, which the team finished in Jen Sward’s GAM 450 course. Jeep Barnett, one of the former DigiPen students who developed and created both Narbacular Drop and Portal, recalls that one of their challenges during their senior year was to learn how to get artists and programmers to communicate effectively. Their hard work paid off. Valve hired the entire team to come to their company to apply their portal concept to a commercial game. Starting from scratch and without using any code they wrote for their student game, Jeep and the team developed Portal. In this game, players must solve physics-based puzzles and overcome challenges by opening portals to move objects and themselves through the gaming environment, the eerie Aperture Science Laboratories. Valve has bundled Portal as part of the AAA package The Orange Box, which includes Team Fortress 2 and Half-Life 2: Episode Two. Reflecting back on the process, Jeep admits that working on the commercial title was daunting at first. “We were no longer making the game just for ourselves,” he says. “The stakes were higher – we were working with someone else’s wallet and trying to catch the attention of a potentially bigger audience, all while trying to impress our heroes.”

Jeep also has high praise for his DigiPen experience and how it prepared the team to step into the industry so seamlessly. “We feel we owe DigiPen everything,” Jeep admits. “We have nothing but respect for the DigiPen instructors and the quality of education we received.” He advises fellow DigiPen students to stick with it, even when the workload seems tough. “DigiPen is highly respected,” he reminds us, “and a DigiPen degree will open many doors for you.” Most of the team has chosen to stay at Valve, where they plan to continue pursuing successful careers.
Antoni Boerkoel
Computer Science
Game Software Design & Production

Dr. Antonie Boerkoel has spent the last twenty-five years teaching mathematics. After earning a master’s degree in mathematics from the University of Leiden in the Netherlands, he came to the United States and completed a Ph.D. at the University of Texas in Austin. Although his primary area of interest is number theory, Dr. Boerkoel also enjoys working on areas such as combinatorics, geometry, abstract algebra, and complex analysis. He has taught the gamut of math courses, from remedial math to undergraduate and graduate classes, including trigonometry, calculus I-III, geometry, linear algebra, abstract algebra, matrix theory, discrete math, number theory, real analysis, complex analysis, combinatorics, and problems solving. He has even taught online courses. Prior to coming to DigiPen, Dr. Boerkoel taught mathematics at Emporia State University in Kansas. After his wife, a Boeing engineer, relocated to Renton, Dr. Boerkoel began teaching part-time at DigiPen in 2005. This is his first year as a full-time professor at the Institute.

“Teaching is in my blood,” he states. He identifies his most fulfilling teaching experiences as the times when he shows students the beauty and power of mathematics. “It is great when you can spark that recognition in students of ‘wow this is cool,’” he declares. Dr. Boerkoel believes that there are certain characteristics to mathematics that draw people to the discipline. “There is the beauty of the field, with its tremendous scope, underlying structure, and powerful techniques,” he explains. “Merely playing in this rich field of pure ideas is totally fun and fascinating, but what really drives us to do math is the bliss of discovery. When you figure out something hidden, discover a new gem hidden behind the surface, unearth a hidden structure, that’s when this sense of ‘wow’ is experienced first-hand. Leading students to those experiences I think is what I find most fulfilling as a math teacher.”

Dr. Boerkoel characterizes his role as a mathematics teacher as that of a guide who introduces students to “the amazing beauty and the truly unbelievably powerful tools” of the field. In order for students to gain a good appreciation of mathematical concepts, he believes that they need to spend time “playing” with them and making their own discoveries. “Teaching goes beyond merely passing on facts, theorems, and tools,” he states. “Mathematics is about understanding, penetrating into the underlying structure, and figuring out ‘how’ things work and ‘why.’ Without an exploration of the ‘why’ question, he believes that teaching would be rather hollow. Dr. Boerkoel understands that teaching students to reason is at the heart of mathematics education. For example, students need to know more than just what the Pythagorean theorem is. They need to understand why it is true, how and when it can be used, and why it is not true in other geometries. Dr. Boerkoel also finds the fostering of problem-solving skills to be another primary goal of mathematics education. He seeks to develop students’ abilities to unleash the full power of the brain to solve problems.” As he states, “If the math department at DigiPen just taught students about the dot product and other basic facts, and failed to attend to fostering student ability at developing general problem-solving skills, we would not be serving our students as educators.” He finds the Institute’s math department to be strong at developing these skills in DigiPen’s students.

Beyond his teaching responsibilities at DigiPen, Dr. Boerkoel spends a significant amount of time on mathematica. For example, he is currently researching geometrical topics. Outside of mathematics, Dr. Boerkoel spends time on projects around the house and on copying the works of master painters like Ingres, Rembrandt, Vermeer, and Cole. He does enjoy working with his hands. One of his hobbies at which he is most successful is chess. A few years ago, he became a USCF correspondence chess master and was even rated as 53rd in the U.S. Dr. Boerkoel enjoys his life and profession. He concludes that “truly enjoying what you are doing is important. If you are not enjoying what you are doing, you are wasting your time. Life is Bliss, so enjoy it and don’t mess it up!”

News from Financial Aid

Are You Auditing a Class?

Please be aware that if you are auditing any courses, you will be ineligible to receive financial aid for that course. This could potentially reduce your load to less than full-time. If so, please see the Financial Aid Office immediately, as we will be here to assist you and your financial aid needs.

Your Financial Aid Could Be at Risk if You Are Not Registered for 12 or More Credits

Financial aid students who are less than full-time (< 12 credits) for the spring semester could have their loans, grants, and scholarships reduced. If you are a student who receives financial aid, and you are taking less than 12 credits, you must see the Financial Aid Office immediately to avoid having your financial aid returned or placed on hold.

Financial aid students who are less than half-time (< 6 credits) for the spring semester will not be eligible to receive any financial aid. If you are one of these students, your financial aid will be returned or cancelled. Federal regulations mandate that if you are less than half-time as of the date of disbursements – financial aid loans will disburse 1/7/08, and grants will disburse the week of 1/21/08 – the Financial Aid Office is required to return the funds immediately. If you are a student who receives financial aid, and you are taking less than six credits, you must see the Financial Aid Office immediately.

Financial Aid Disbursements for Spring Semester 2008

- All Stafford loans will disburse on 1/7/08.
- All grants will be ordered on 1/21/08.

Washington State Need Grants will not be ordered until the week of 1/21/08. The estimated time of arrival will be towards the end of January.

Please remember that reimbursement of alternative and private loans is never automatic. You will need to fill out a reimbursement request form located at the Main Office, Art Campus Front Office, or in the Financial Aid Office.

Please check with the Financial Aid Office if you are uncertain about when your loans and/or grants will disburse. Please understand that although your loans and/or grants will disburse on the dates mentioned above, it will take up to two weeks or so before you receive an excess funds check for living expenses, if you are eligible for one. As always, you must fill out a reimbursement request form for your alternative loans if you are expecting any excess. You may find a reimbursement request form online or at the Main Office, the Art Campus, or the Financial Aid Office.

FAFSA Renewal Reminder

You must renew your FAFSA online in order to receive financial aid for the 2008-2009 award year. Please visit www.fafsa.ed.gov. You can apply as early as Jan. 2, 2008. Do not forget that you also must fill out a DigiPen Financial Aid application for the 2008-2009 award year. This will be available at the Main Campus, Art Campus Front Office, Financial Aid Office, and on our website.

- Kim King
Women in Games and Entertainment (WIGE)

After a short hiatus to redefine its role amongst the student body, the Women’s Association was revived this fall as the Women in Games and Entertainment (WIGE). The purpose of the WIGE is to support diversity in the classrooms and the workplace. To meet our goals, we seek to learn from industry professionals, whom we invite to our monthly meetings to speak about their experiences and to share their expertise with students.

Studies demonstrate that there are unique challenges that women experience in general and more specifically in the workplace (ie. glass ceilings, lower salaries, and stereotypes). There are also clear differences between men and women that we cannot ignore. For example, if women want to raise families, they may confront pregnancy, maternity leave, and extended time away from a demanding and intense industry. Others who have already gone through these situations can best address these types of issues and share some strategies for success. For those who do not experience these concerns, it can often help their understanding of others who do deal with these matters.

So far this year, we have had three meetings. In September, we held a kick-off meeting. We discussed issues that women confront at DigiPen, how those issues affect their work or experiences at the school, and ways to overcome or eliminate any concerns. In October, we hosted a panel of guest speakers from Game-House Studios, a subsidiary of RealNet-works. Several programmers and artists came to speak about their experiences in the game industry and how they reached this point in their careers. Iris Williams explained her unusual story of returning to school at the age of 40 to complete a Bachelor of Science in Computer Science so she could work in the game industry. In November, we heard from Tami Foote and Stacie Magelisen, guest speakers from ArenaNet. Tami brought several examples of her work from the past seven-and-a-half years at companies like Humongous, Snowblind, and ArenaNet. Students viewed examples of her work as a 3D modeler and environment prop artist and heard about the work culture at ArenaNet. As an experienced lead of a writing team, Stacie spoke about the production process and collaboration between writers, designers, and other departments. Students were given the opportunity to ask numerous questions that ranged from technical limitations of polycounts to how ArenaNet got inspired for Factions.

While often female, WIGE’s guest speakers all share a common trait—they have already forged a place for themselves in a predominantly male industry. Their experiences often confirm that they do not encounter any difficulties or different treatment, and their success demonstrates that the industry could benefit from further increasing diversity. Anyone who shares the goals of the organization is invited to attend.

- Angela Kugler

Human Experience Engineering Seminar

Recently, DigiPen announced a joint venture with the Human Interface Technology (HIT) Lab at the University of Washington. Subsequently, Dr. Thomas Furness, Director Emeritus of the HIT Lab spoke at DigiPen on November 16. Over a career of 40 years, Dr. Furness has been exploring and developing technology tools for getting bandwidth to the brain and between brains. He is the genius who pioneered virtual reality research and holds a number of patents in that emergent area of research. Dr. Furness lectures widely, teaches courses in virtual reality and user-interface design, and supervises graduate students. He is the inventor of the personal eyewear display, the virtual retinal display, the HALO display, and other display and interface technologies. Recently, Dr. Furness received the Discover Award for Technology Innovation for his invention of the Virtual Retinal Display. He is also an Erskine Fellow and Adjunct Professor at University of Canterbury, New Zealand.

His presentation was fascinating and compelling, and it marks a quantum leap in DigiPen’s opportunity for expansion into the technology and industry of the new millennium. It will not be long before the technology resulting from virtual reality research dominates not only the media but education, epistemology, and ontology. This is of some note to DigiPen students who, at this very moment, are being trained as professionals competent to address such subjects. Occasionally, such opportunities are thrust upon us. The question is whether we will recognize them.

- Stephen Schafer

Important Dates

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<tr>
<th>Date</th>
<th>Event</th>
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<tr>
<td>Jan. 7</td>
<td>Classes begin – Spring Semester</td>
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<tr>
<td>Jan. 13</td>
<td>Last day to add classes for Spring Semester; withdrawal deadline for 90% refund</td>
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<tr>
<td>Jan. 18</td>
<td>Final day to drop class without academic penalty</td>
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<tr>
<td>Jan. 21</td>
<td>Martin Luther King, Jr. Day – no classes</td>
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<tr>
<td>Feb. 2</td>
<td>Withdrawal deadline for 75% refund</td>
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<td>Feb. 3</td>
<td>Founder’s Day</td>
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<tr>
<td>Feb. 15</td>
<td>Tuition deposit for Summer Session due</td>
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<tr>
<td>Feb. 18</td>
<td>Presidents Day – no classes</td>
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<tr>
<td>Feb. 18-23</td>
<td>Spring Break – no classes</td>
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<tr>
<td>Feb. 27</td>
<td>Final day to receive a “W” on transcript for Fall Semester withdrawals, 50% refund; withdrawals from institute after this date will receive “F” grades on transcript; final day to drop a class</td>
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<tr>
<td>Mar. 20</td>
<td>Balance of tuition for Summer Session due</td>
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Women in Games and Entertainment (WIGE) is invited to attend.

- Angela Kugler

DigiPen PodClass

December’s PodClass is the first of a two-part series on the business of game development. Host Omaha Sternberg interviews John Williamson, President of Zombie Studios, and Jeff Pobst, CEO of Hidden Path Entertainment. Additionally, Ms. Sternberg discusses the game development world and the details of testing with Brent Conklin, test manager at the Aces Game Studio at Microsoft. These interviews were all conducted at the World Cyber Games Conference in Seattle this last October.

Listeners can subscribe to the podcast via iTunes or can go to DigiPen’s website. If you have a topic you would like to hear about on the podcast, please email your suggestions to podclass@digipen.edu.
Character Models

Modeling a character is about more than simply placing mesh lines; it is also about crafting the soul of the character so that even when it is standing still it seems alive. Good character modeling is based in a thorough understanding of anatomy, not only from a view of placement and connection of muscles and tendons, but also from how each piece works as part of a moving entity. This is the raison d’etre of modeling a character – effective character modelers bring a character to life through animation and, most importantly, tell a story through these characters. Good character modelers also understand costuming, motion, evolved mechanics of locomotion, and, perhaps most importantly, the communication of an idea in both non-verbal and verbal means. These modelers know how to sculpt the character so it can act.

Andrew Palfenier

Andrion Becker

Travis Hayes
2D or Not 2D Animation Festival

November 1-3, the Animaticus Foundation hosted the second annual 2D or Not 2D Animation Festival. DigiPen’s own Tony White founded the non-profit Animaticus Foundation to preserve, teach, and evolve the art of traditional, two-dimension animation in this digital age. The animation festival celebrates the work of all those animators out there who have the passion and tenacity to make their own independent films in a challenging environment.

The first day of the festival was entirely focused on students from local elementary, middle, and high schools. The day began with a screening of previous award-winning student films at the festival. Then Mr. White and Linda Spain, a professional animator, demonstrated some of the principles of animation. This showcase prepared them for the Flipbook Competition, where school students of all ages are invited to create and then submit flipbooks of their own. The Animaticus Foundation will announce the winners on their website (www.animaticus.com) in January when all the winning flipbooks will be screened for all to see. The second part of the day included presentations by DigiPen Institute of Technology and VanArts, a media arts training institution in Vancouver, B.C. Mr. White explained how DigiPen is probably the “best animation school in the country” right now. He screened a PowerPoint presentation of traditional artwork – drawings, paintings, character designs, and digital art – by freshmen and sophomores in DigiPen’s Bachelor of Fine Arts in Production Animation. These high-quality examples blew everyone away.

The second day of the festival was dedicated to women in animation. “I feel that the contribution women make to animation has rarely been acknowledged,” Mr. White admitted, “let alone encouraged in the dark and distant past by many of the major animation studios.” To correct this situation, the first showing of festival competition entries was entirely composed of animated films created by women. The evening began with Nancy Beiman, one of the best teachers of animation, as well as a top professional animator who has worked at Disney and Warner Brothers. Ms. Beiman brought her presentation to a close by showing her first-ever independent film from 1983, “Your Feet’s Too Big,” an animated short choreographed to the great Fats Waller song of the same name. Kathie Flood, a Microsoft games producer, followed with a side-by-side comparison of games production versus film production. The final presenter of the evening was Pixar animator Kureha Yokoo. Starting with A Bug’s Life, Ms. Yokoo has worked on every Pixar film since. She showed the progression reel of Ratatouille animation she did where Emile first kisses Colette in the street, just before she maces him. She explained her step-by-step process of creating the scene, from blocking-out to its final render. The evening was rounded-off by a late showing of some of the more bizarre experimental films that were entered into the festival competition.

The third day began with a screening of last year’s festival award winners. Large portions of this day were dedicated to screening this year’s film entries, which numbered at twice as many as last year’s entries. In the afternoon, Michel Gagne, an animator who has worked on Quest for Camelot, The Iron Giant, and Ratatouille, discussed his previous and forthcoming projects. Then Tony White spoke about the Animaticus Foundation and inspiring work done by DigiPen B.F.A. students. Keynote speaker at the event this year was Don Hahn, who has the distinction of being producer on The Lion King, the first animated film ever to get a Best Picture Oscar nomination. Mr. Hahn provided the audience with an informative, humorous, and inspirational presentation of his production process. He showcased some of the marvelous art and imagery that has inspired him as one of Hollywood’s foremost producers.

The festival concluded with the awards ceremony. Merit awards were given to seventeen films, and Golden Pencil awards were presented to the filmmakers who are considered to have made the greatest achievement in their respective categories (for a list of award recipients, please visit www.2dornot2d.org). Additionally, the Animaticus Foundation presented this year’s Roy E. Disney Award to Don Hahn for his contribution to traditional 2D animation. The festival culminated in the evening’s Gala Event at the New Everett Theater where attendees chatted and networked. Everyone who attended this year’s festival found it to be a wonderful event, and they are looking forward to next year.

- Tony White

Announcements

Student Services Wiki

The Student Services Department is pleased to announce the launch of its wiki. The Student Services Wiki provides information on all the services provided including the Library, Career Services, the Counseling Center, and more. Logon to the wiki at inside.digipen.edu, and check back regularly as we will be adding more information weekly.

Seattle Code Camp

On January 26 and 27, DigiPen will host the third annual Seattle Code Camp. This unique opportunity is a new type of community event where developers talk with – and learn from – fellow developers. Sessions will range from informal “chalk talks” to more formal presentations by experienced developers. For more information and to register for the event, please visit https://seattle.codecamp.us/default.aspx.

The Presidential Forum on Renewable Energy Scholarship

This $10,000.00 scholarship is open to anyone between 18-24 years of age who is enrolled as of January 1, 2008. The deadline for the application is February 1, 2008. Applicants must write an essay on energy. Their essays will be evaluated on originality, political, economic, and technical feasibility; and on their long-term viability. Please go to www.2008EnergyForum.org for more details and the application.
Student Association
President’s Corner

Making it halfway through the year and reaching Winter Break is a huge step for anyone at DigiPen. For some of the freshmen, you’ve made it through the first semester of college. It’s only going to get harder, but you have a better idea of what to expect. For the seniors, in a few short months you’ll be graduating, getting jobs, and making a name for yourselves. And regardless of whether you’re a freshman or a senior, artist or programmer, I’m sure you go back over the break and find that one game you’ve been waiting to play so you can spend a couple days reminding yourself why you’re here.

Some students spend break catching up on their year-long projects. Others fix bugs in their games or prepare resumes and websites for upcoming internship opportunities. When everyone returns after break, they are feeling refreshed and ready to get back to work. Students enroll in new classes and are eager to experience learning new information.

I’m always excited for a new semester, because I feel like we start with a clean slate. Regardless of how the previous semester went, you can always change things that didn’t go as planned. This same attitude carries over to the Student Association. We’ve learned what works, what doesn’t, and what we need to focus more of our attention on. Even though the number of months we have left to work and make progress is dwindling, we try not to let that affect us. Sometimes change is slow, and with only two semesters, a lot of the tasks we want to complete we simply cannot. This process of change takes time; but with each step we take, we make things better.

For the spring semester, the SA is bringing back many memorable events. There’s the annual Counter Strike tournament where students battle faculty. There’s also the annual Talent Show, which always brings out the ridiculous nature of our student body, much in the same vein as we saw at Halloween. For the second year, the Cook Off will return, but this time to the Art Campus! We’re hoping students and faculty will cook their amazing dishes once again. One of the new events we’d like to try this year is building on the students-versus-faculty idea, but this time with Guitar Hero. It’s always fun to see staff and faculty rock out.

For the new semester, start fresh. Try to get more sleep, and tell yourself you’re going to work a little harder. It’s only a couple more months until summer vacation. And with that, I leave you with a final thought to ponder: What if DigiPen was the opposite of what it currently is: 90% female and 10% male?

- Brittany Aubert

Kelson Gist
Master’s Student in Computer Science

Except for his time at DigiPen, Master’s student Kelson Gist has never lived outside Texas. He earned a Bachelor of Science in Computer Science at Southwestern University in Georgetown, TX. He also minored in biology, thinking that he should leave open the option of medical school. In his junior year, he took a graphics course from an “amazing” professor, who ended up becoming his undergraduate thesis advisor. After that course, he knew that game development and graphics programming were really what he wanted to do. As an undergraduate, he worked as a software engineer for Elfin Oil, Inc. and for the National Minority Faculty Identification Program at Southwestern. Before coming to DigiPen, he had gained experience in application development in Java, web programming with PHP and Java, and database development. He began his graduate program at DigiPen in fall 2005, and he is currently completing his Master’s thesis.

Although he enjoyed all his coursework, two particular experiences at DigiPen stand out. First on this short list are the two game projects on which he worked. “I really enjoy the collaborative aspect of game development,” Kelson admits. “Not only are you working with others to solve problems, but you are also thinking about the needs of others when you are writing your engine or developing your interfaces. It is really motivating to me to see how much a good team can accomplish.”

The second opportunity he enjoyed was getting to explore the depths of graphics programming through his coursework, the game development projects, and his thesis research. “It’s exciting to see how far I’ve come over the last two-plus years,” he says, “but it’s also exciting to see how much there is to learn and to know I’m in a field where there are always new algorithms and advancements to be made.”

He feels that his thesis project in animation, which he has nearly completed under the guidance of Dr. Li, is a strong example of this. “It has been extremely challenging,” he reflects, “but because of that, it’s exciting to see what I have accomplished and to think about what I hope to accomplish before the end.”

When he is not working on his thesis, Kelson enjoys reading a wide range of writings, including fantasy, science fiction, philosophy, and theology. “Like any good DigiPen student,” he admits, “I don’t have nearly as much time for playing video games as I’d like.” He hopes that once he lands his first job, he can invest both time and money into an Xbox 360.

As Kelson ends his thesis work, the job application process will gear up. He and his wife are looking forward to returning to the Austin area. There are several strong game development studios there, so he is hoping that something will work out that will allow them to return to his home state. He recommends that others who are considering graduate programs in computer science should think seriously about what they want to do when they are done. For Kelson, since game development has been the career he has wanted to pursue, DigiPen’s program was a clear choice. He now hopes to translate this experience to the professional field.

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