



EEK 401

The University of Advancing Technology

Student Life Magazine

ISSUE 3 SPRING/SUMMER 2008

U.S. ²²
NETWORK
SECURITY
THE RELENTLESS
ATTACK BY
FOREIGN ENEMIES



²⁴ ALUMNI EXPOSÉ
POISON WIND

¹⁴ SECRETS
OF THE UNIVERSE

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COMPUTER FORENSICS

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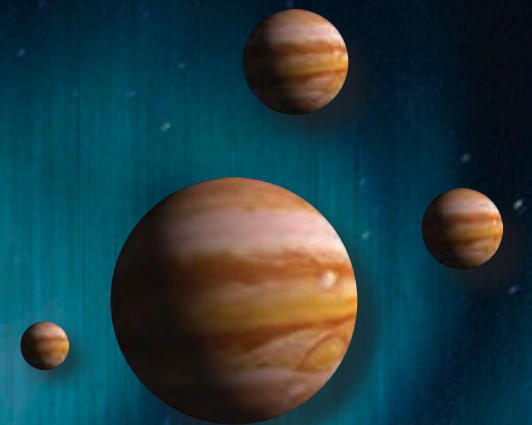
WWW.UAT.EDU/COMPUTERFORENSICS

UNQUESTIONABLY CORRECT.



ARTIFICIAL LIFE PROGRAMMING > TECHNOLOGY MANAGEMENT > COMPUTER FORENSICS > GAME PROGRAMMING > NETWORK ENGINEERING > NETWORK SECURITY > SOFTWARE ENGINEERING > WEB ARCHITECTURE > ROBOTICS AND EMBEDDED SYSTEMS > DIGITAL ANIMATION > DIGITAL ART AND DESIGN > DIGITAL VIDEO > GAME DESIGN > GAME ART AND ANIMATION

T.O.C. ○ ○ ○



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Can Humans Really Travel to a Different Dimension?

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events

GDC 2008

www.gdconf.com
San Francisco, CA
February 20-23, 2008

The Game Developers Conference defines the future of the \$10 billion game industry and shapes the next generation of entertainment. The conference provides an independent forum for expert developers from around the world to share ideas, build skills and learn about the latest tools and technologies.

The UAT Fly-in G33K Program gives you the opportunity to tour our unique, technology-infused campus, sit in on classes, eat at the campus cafe, meet with Admissions and Financial Aid representatives, attend special events planned by UAT Residence Life and Student Life, and, best of all, be the overnight guest of a current UAT student. Don't miss out on our Tech Forum and Full Access events happening this Summer & Fall!

FLY-IN GEEK PROGRAM

www.uat.edu/flyinggeek
Tempe, AZ
June 20 - 21, 2008
October 17 - 18, 2008
November 7 - 8, 2008
Text Geek to 77812 to RSVP

FULL ACCESS 2008

www.uat.edu/fullaccess
Tempe, AZ
June 21, 2008
Text Geek to 77812 to RSVP

Listen to the Industry's Experts talk about hacking and programming. Get information about UAT's degree programs from deans, faculty and students. Learn about financial aid, housing and enrollment and tour the campus! Join us for our Full Access event and also listen in on our industry's leading technology experts present at Tech Forum or shadow a UAT student at our Fly-In Geek event!

GEEK WEEK

October 2008

Other universities might call it "Homecoming," but at UAT, it's a week for geeks, so we call it... well, Geek Week. Our Student Life and Resident Life teams put together seven days full of everything geek - from movie nights to Pi-Off and Dodgeball Tournaments - for fun and prizes.

DESERT CODE CAMP

www.desertcodecamp.com
Tempe, AZ
May 31, 2008

This code camp is about sharing ideas with the developer community at large. It's a place for developers to come and learn from their peers! Topics are always based on community interest and never determined by anyone other than the community. Come share your ideas!

DEFCON

www.defcon.org
Las Vegas, NV
August 8 - 10, 2008

One of the largest hacking events in the World! UAT's DC 480 group is the official sponsor for Defcon.

TECHNO SECURITY CONFERENCE

www.technosecurity.com
Myrtle Beach, South Carolina
June 1 - 4, 2008

The conference promises to be another incredible training and networking opportunity. There are dozens of security-related conferences including the absolute best training and networking available anywhere!

TECH FORUM 2011

www.uat.edu/techforum
Tempe, AZ
June 18 - 20, 2008
Text Geek to 77812 to RSVP

UAT brings industry's leading technology experts on campus for three extraordinary days of breakthroughs, insights, trends and challenges. Join us for Tech Forum and stay for our Full Access event. Or shadow a UAT student at our Fly-In Geek event!

UAT IN THE NEWS

Read more UAT news at www.uat.edu/news



U. S. GOVERNMENT PROPERTY
NO TRESPASSING

The President of the United States has a new ally in the strategy to secure cyberspace: UAT received the coveted designation as a Center of Academic Excellence in Information Assurance Education (CAEIAE) from the National Security Agency (NSA) and the Department of Homeland Security earlier this year following a lengthy, thorough and rigorous evaluation process. What exactly does this mean to UAT?

"It's huge!" said Associate UAT Professor Shelley Keating, a specialist in Networking and Security Technology at the College of Software Engineering.

"This is elevating and adding even more credibility to our information assurance programs-putting students enrolled in these programs on a level playing field with much bigger schools."

Keating, along with Associate Dean Sue White, traveled to Boston to accept the honor on behalf of the University.

"It was a tremendous honor to be at that ceremony," said White, "and it was really fantastic to be representing UAT among such distinguished institutions. We're really joining an elite list of schools."

"The thing I can't underscore enough is simply that this designation does phenomenal things for our students, and it's a tremendous acknowledgement of our curriculum in general, specifically in information assurance. For people who are looking to garner opportunities with the government, this kind of credibility provides them access."

Keating feels the designation will ring well with industry professionals, and prove a boon to future UAT grads.

"This certification says that the National Security Agency states our University is teaching the future information assurance professionals what they need to know in an environment they should be learning in. That's huge. This designation adds so much value to our students and curriculum."

Read more UAT news at www.uat.edu/press

GLOBAL PAINTERS

RETRO STARSHIPS



If you want to paint the world, why not start with San Francisco at the Game Developer's Conference (GDC)? Or how about a real blast from the past aboard a familiar spacecraft retrofitted after twenty years in dry dock? That was the plan of two game design teams from the University of Advancing Technology (UAT) as they descended on the annual GDC this spring.

Both Ink! and StarFlight showcased their collaborative efforts in the week-long

gathering of the industry's best and brightest.

Both teams were fortunate enough to have been interviewed at GDC by Jill Duffy, editor of GameCareerGuide.com. She asked the Ink! & Starflight teams to write a postmortem about the creation of their games and the innovative processes that unfolded during development.

Read the full story about these two UAT student teams on pages 8 & 40.

GET INK!'D

Ink! is a 2D platform / brawler that takes a unique approach to gaming that seamlessly integrates the latest in fluid control schemes, video game layout and art. Starting out as a student project at the University of Advancing Technology (UAT), *Ink!*'s creators developed a real non-Mod, full-length game that doesn't require players to download special software to play.

Assuming the role of gifted artist Vernice Dainumeri (Vern), players must counter an evil force that has arisen from the depths of a monochromatic realm and stolen all color from the world. Under the dark banner of the failed artist Vincent van Jeff, a series of colorless creations consume all vibrancy from the world, leaving it bleak and pale. Without color and art, the world of Anchiano will die.

Players must travel through 16 levels across four different worlds to repaint color back into the world and defeat Vincent van Jeff. As players kill monsters, score points and collect paint cans (essential for level progression), the vibrant color of Anchiano begins to reemerge.

The students behind *Ink!* have created a fun and imaginative platform/brawler that pays homage to old school games.

The concept of *Ink!* was the result of a meeting between two UAT students, lead artist Nicholas Gilliland and lead designer Zane Milakovic. They wanted to create a game that was very artistic and had a storyline that revolved around art. Milakovic wanted to showcase Gilliland's artistic ability in conjunction with his own design prowess. Gilliland's original ink drawings became the catalyst for inspiration and remained the focal point throughout development of the game.

Realizing *Ink!*'s potential, a group of UAT students assembled to combine their affinity of platformers with a unique artistic approach to game design. They brought back an old feeling to video games that has not been seen in a long time and did so in a very modern way.

The design phase of *Ink!* began with a team of three leads and one artist in February of 2007. Now, four programmers, five artists, two level designers, a sound engineer and a music composer make up the team. The extra help was certainly needed as the *Ink!* team constantly evolved their creation and overcame various hurdles throughout the project. The team went from original theme composition hand-colored on light boards, to a tossed out 3D concept, to switching gears in mid-stream from one version of Torque Game Builder to another.

Throughout the project, the *Ink!* team continually improved and made revisions to the game program, incorporating creative tweaks from individual team members regarding background animation, control schemes and improved save functions. Not to mention the countless hours spent seamlessly blending platforming and brawling elements.

"This was actually one of the more interesting components of the games creation from a programming standpoint," said programming lead Neil Alpert. "We needed to develop and program a new type of camera that would allow platforming and brawling."

Typically, platform cameras are fixed and go where the player needs to go. Brawlers usually use a frame-by-frame type of camera. When a player enters a room they shoot or complete an objective and then move to another room. It's section by section. What the team did was develop a camera that blended both.

"We created a camera that could follow the player during platforming, and then stop so the player can brawl. We accomplished this by creating an invisible player that we could loosely nail the camera to. This gave the camera some give and allowed it to remain smooth while tracking the player character. We then told the invisible player to move in relation to the actual player. So, when the actual player character looks right, the camera scoots to the right and shows the player where they can go," said lead programmer, Neal Alpert.

However, designing a camera that allowed for both platforming and brawling wasn't the only challenge the *Ink!* team faced. As a player progresses through the game, they need to attain powers and abilities essential for level progression.

"The level design of this game revolved heavily around powers and abilities that assist the player throughout the game and essentially determine how they progress through the levels," said lead designer Zane Milakovic. He added, "A lot of our programming centered on determining what powers or abilities the player could possibly have at a given point, what powers they definitely have and how they can go back and get the powers they need if they don't have them."

This is crucial because later in the game, abilities must be used in unison to carry out objectives. So it became very tedious for the team to draw and design levels with that in mind. With so many variables needed to be accounted for and designed around, selecting the appropriate software to develop *Ink!* was extremely important.

The *Ink!* team used several products they deemed as key to successfully developing *Ink!* For the artists, all images were hand-drawn using a Wacom Tablet inside Adobe Photoshop. The sound team found both Apple GarageBand and Sony Acid helpful when creating the music and sound effects that play throughout the game. The programming team used Garage Game Torsion IDE and Visualstudio.net when writing the pages of code needed to create the fluid integration of platforming and brawling. "We also used Basecamp for project management," said Milakovic. "Good project organization and management are crucial for a project this size," he added.

When asked what advice they had for students attempting a project like *Ink!*, lead artist Nick Gilliland had these words of advice: "Start small. Even a simple game can grow in complexity; death is in the details - it's not the size but the quality. Also, get a team of like-minded, dedicated students that are excited to see the vision reach fruition. Lastly, put the effort and work in. It will be rewarding in the end." And it has been very rewarding for the *Ink!* team.

The *Ink!* team was chosen to attend the Game Developer's Conference in San Francisco in February. *Ink!* is the first "from scratch" game developed by UAT students to be showcased anywhere, and companies at GDC took notice. Companies such as Vendai, CCP, Full Moon, Eiodos, GLU, Game Loft and First Play were all interested in the unique design of the platform brawler.

Team lead Zane Milakovic said, "Mobile phone companies like GLU and Game Loft really liked *Ink!* and expressed an affinity for it."

As a result, many of the team members were asked by numerous companies to take online programming tests - the first step in being offered an interview for employment or an internship. "Unfortunately," said Zane, "many of the students had to respectfully decline the offer because their internships wouldn't happen for another year. However, it was very encouraging to younger team members to receive that kind of attention."

Zane landed a remote internship with DW Creations located in St. Louis. While this was not the direct result of GDC, the conference gave Zane the opportunity to network, show off his portfolio and receive constructive feedback from industry leaders.

"The portfolio I took to GDC and the advice I received during that conference really helped me land my internship," said Zane.

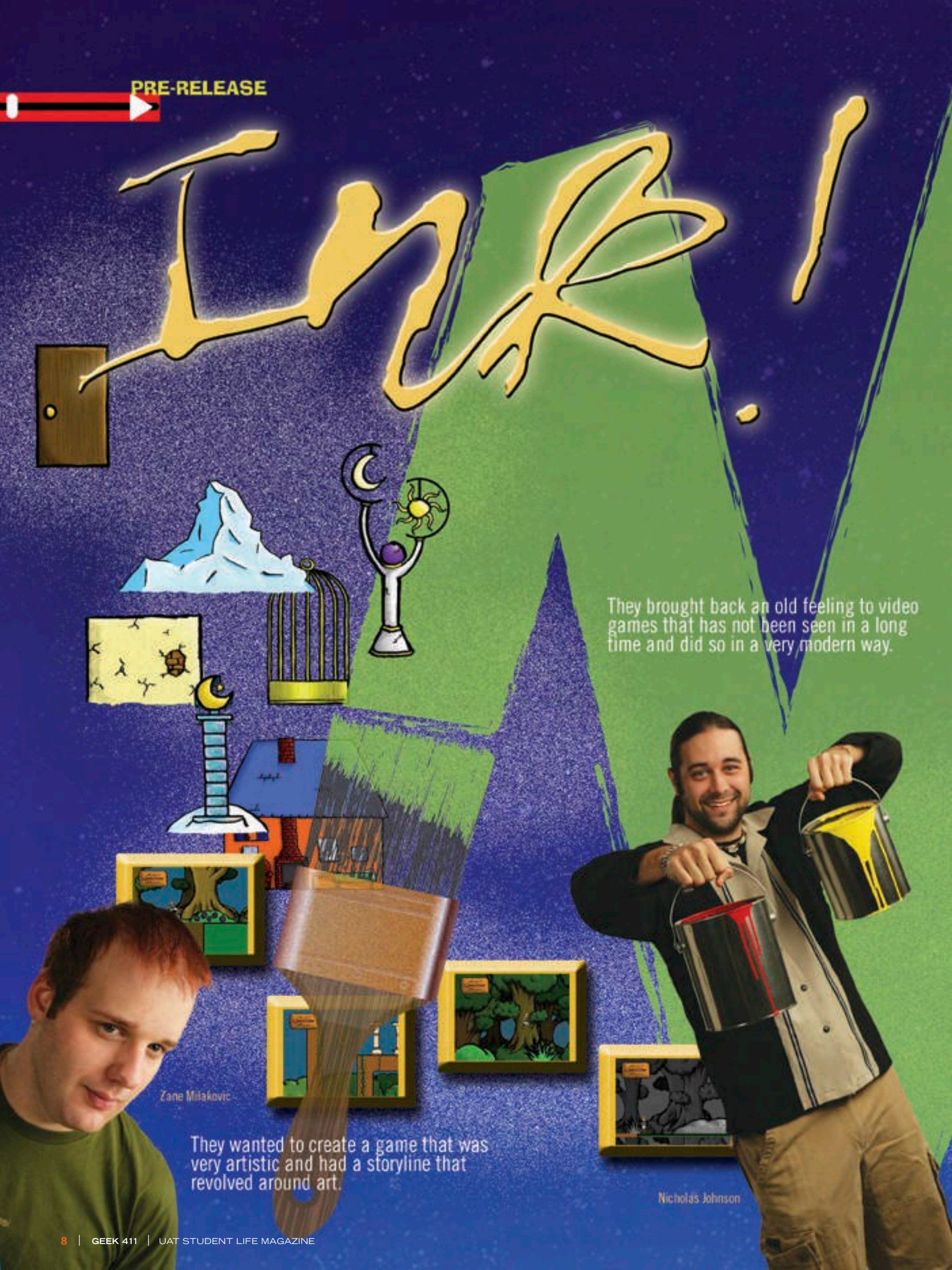
The *Ink!* team has created a very original and very unique game. *Ink!*'s innovative design concept effectively combines platforming and brawling with refreshing originality. Enough originality, in fact, that the team is anxiously awaiting a possible Xbox Live inclusion, another UAT first.

The innovation and creativity evident in *Ink!* are indicative of the learning environment at UAT. Students in the game development program are using a revolutionary approach to platforming and brawling design, placing emphasis on fluid control schematics. The creative approach to game design illustrated in *Ink!* will certainly set a new standard for future game development.

They brought back an old feeling to video games that has not been seen in a long time and did so in a very modern way.

They wanted to create a game that was very artistic and had a storyline that revolved around art.

Go to www.uat.edu/ink to see more from GDC.



Zane Milakovic

Nicholas Johnson



TEAM MEMBERS:

- Lead Designer - Zane C. Milakovic
- Programming Lead - Neal Alpert
- Programmer - Corey Meade
- Programmer - Tim Mills
- Programmer - Robert Schiewe
- Programmer - Ben Zweber
- Artist Lead - Nick Gilliland
- Artist - Sara Root
- Artist - Jeff Gordon
- Level Designer - Craig Ballard
- Level Designer - Robert Campbell
- Music Composer - Abigail Perez
- Sound Designer / Foley Artist - Guy Harriss
- Sound Designer / Foley Artist - Tony Reese
- Web Designer - Nick Johnson

SPECIAL THANKS TO:

- Video Editor - Ryan Luitbrand
- IGN Correspondent - Jason Bassett
- Mentor - Michael Eilers

"The level design of this game revolved heavily around powers and abilities that assist the player throughout the game and essentially determine how they progress through the levels."



Ben Zweber

Sara Root



The innovation and creativity evident in *Ink!* is indicative of the learning environment at UAT.

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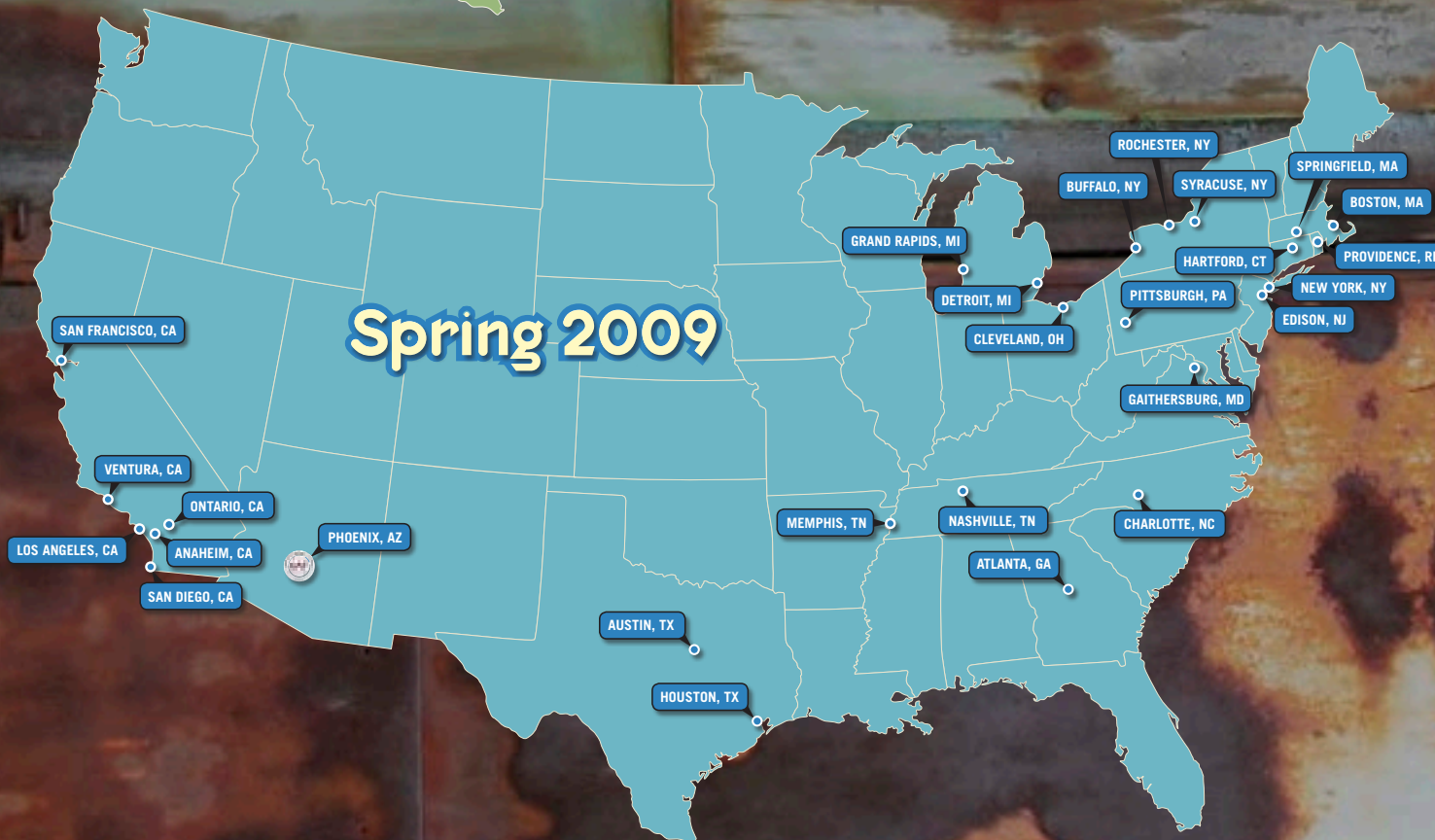
did you know...

UAT is close to every sun sport imaginable – golf, mountain biking, hiking, swimming, rollerblading and skateboarding

TRAVEL SCHEDULE



Fall 2008



Spring 2009

WE'RE COMING TO A TOWN NEAR YOU TO GEEK YOU UP!

The UAT Road Show is on its way across the country to spread the word about this unique educational opportunity. If you're a seriously geeked student who wants to conquer the technology world, attendance is mandatory. It's the fastest way to get face-to-face with a UAT representative and get the information you need to make the most important decision of your life.

Check us out online at www.uat.edu/nacactravel and see if we will be in your area. If you'd like UAT to visit your school ask your guidance counselor to contact a UAT high school Liaison Coordinator at 877-UAT-GEEK. (877-828-4335)

* Fall 2008 NACAC Schedule

BIRMINGHAM	Sun., Sept. 14	1:00 pm – 4:00 pm	Birmingham-Jefferson Complex Birmingham, AL
PHOENIX	Sun., Sept. 14	12:00 pm – 4:00 pm	Phoenix Civic Plaza Phoenix, AZ
BATON ROUGE	Tues., Sept. 16	9:00 am – 1:00 pm 6:00 pm – 9:00 pm	Baton Rouge River Center Baton Rouge, LA
PHILADELPHIA	Sun., Sept. 28	11:00 am – 4:00 pm	Pennsylvania Convention Center Philadelphia, PA
SEATTLE	Sun., Sept. 28 Mon., Sept. 29	12:00 pm – 4:00 pm 9:00 am – 12:00 pm	Washington State Convention & Trade Center Seattle, WA
WASHINGTON	Mon., Sept. 29	9:30 am – 12:30 pm 6:30 pm – 8:30 pm	Washington Convention Center Washington, DC
SPOKANE	Weds., Oct. 1	9:00 am – 1:00 pm 6:00 pm – 8:00 pm	Spokane Convention Center Spokane, WA
MINNESOTA	Wed., Oct. 1 Thurs., Oct. 2	9:00 am – 12:30 pm 4:30 pm – 8:00 pm 9:00 am – 12:30 pm	Minneapolis Convention Center Minneapolis, MN
PORTLAND	Fri., Oct. 3 Sat., Oct. 4	9:00 am – 12:00 pm 1:00 pm – 4:00 pm	Oregon Convention Center Portland, OR
LONG ISLAND	Sun., Oct. 5	11:00 am – 4:00 pm	Nassau Veterans Memorial Coliseum Uniondale, NY
BOISE	Tues., Oct. 7	9:30 am – 2:30 pm 6:00 pm – 8:00 pm	Boise Centre on the Grove Boise, ID
CINCINNATI	Sun., Oct. 12	1:00 pm – 4:00 pm	Duke Energy Center Cincinnati, OH
ST. LOUIS	Sun., Oct. 19	12:00 pm – 3:00 pm	St. Louis University St. Louis, MO
CHICAGO	Sat., Oct. 25	10:00 am – 2:00 pm	Navy Pier Chicago, IL
MILWAUKEE	Sun., Oct. 26	12:00 pm – 3:30 pm	Midwest Airlines Center Milwaukee, WI
INDIANAPOLIS	Thurs., Nov. 6	9:00 am – 12:30 pm 5:00 pm – 8:30 pm	Indiana Convention Center & RCA Dome Indianapolis, IN
BALTIMORE	Tues., Nov. 11 Wed., Nov. 12	9:00 am – 1:00 pm 6:00 pm – 8:00 pm 9:00 am – 12:00 pm	Baltimore Convention Center Baltimore, MD
ATLANTIC CITY	Thurs., Nov. 13	9:00 am – 12:00 pm 6:00 pm – 8:30 pm	Atlantic City Convention Center Atlantic City, NJ

* Fall 2008 schedule based upon last year's Fall 2007 schedule. Dates subject to change.

*Spring 2009 NACAC Schedule

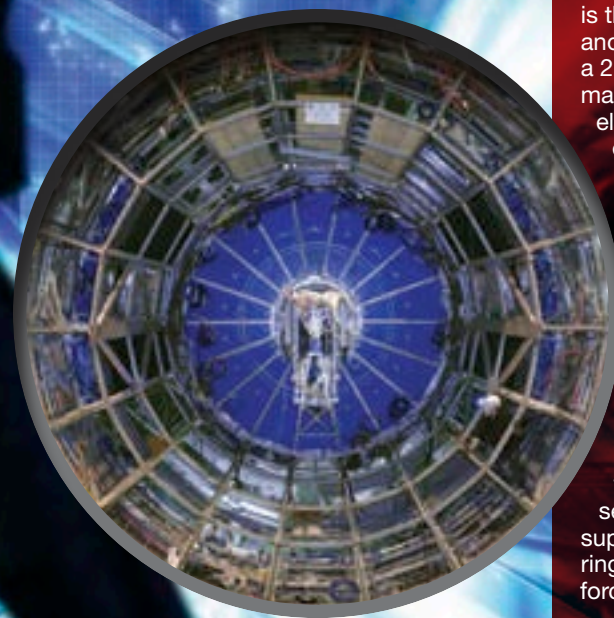
PITTSBURGH	Thurs., Feb. 5 Fri., Feb. 6	9:00 am – 1:00 pm 6:00 pm – 9:00 pm 9:00 am – 12:00 pm	David L. Lawrence Convention Center Pittsburgh, PA
ATLANTA	Sun., Feb. 8	12:00 pm – 4:00 pm	Georgia International Convention Center College Park, GA
LOUISVILLE	Sat., Feb. 28	1:00 pm – 4:00 pm	Kentucky Int'l Convention Center Louisville, KY
SPRINGFIELD	Sun., Mar. 1 Mon., Mar. 2	12:00 pm – 4:00 pm 9:00 am – 12:00 pm	Eastern States Exposition (The Big E) West Springfield, MA
ROCHESTER	Fri., Mar. 13 Sat., Mar. 14	9:00 am – 12:00 pm 1:00 pm – 4:00 pm	Rochester Riverside Convention Center Rochester, NY
SYRACUSE	Sun., Mar. 15 Mon., Mar. 16	1:00 pm – 4:00 pm 9:00 am – 12:00 pm	Onondaga County Convention Center At OnCenter, Syracuse, NY
BUFFALO	Tues., Mar. 17 Wed., Mar. 18	9:00 am – 1:00 pm 6:00 pm – 8:30 pm 9:00 am – 12:00 pm	Buffalo Niagara Convention Center Buffalo, NY
CHARLOTTE	Sun., Mar. 22	12:00 pm – 4:00 pm	Charlotte Merchandise Mart Charlotte, NC
MEMPHIS	Wed., Mar. 25	1:00 pm – 11:30 am	Memphis Cook Convention Center Memphis, TN
NEW YORK	Sun., Mar. 29	12:00 pm – 4:00 pm	Jacob K. Javits Convention Center New York, NY
HARTFORD	Thurs., Apr. 2 Fri., Apr. 3	9:00 am – 11:30 pm 6:30 pm – 8:30 pm 9:00 am – 11:30 am	Connecticut Expo Center Hartford, CT
SAN FRANCISCO	Sat., Apr. 4	3:00 pm – 7:00 pm	Concourse Exhibition Center San Francisco, CA
HOUSTON	Sun., Apr. 5	1:00pm – 4:00pm	George R. Brown Convention Center Houston, TX
AUSTIN	Tues., Apr. 7	1:00 pm – 4:00 pm	Austin Convention Center Austin, TX
BOSTON	Tues., Apr. 7 Wed., Apr. 8	9:00 am – 12:00 pm 6:00 pm – 9:00 pm 9:00 am – 12:00 pm	Boston Convention & Exhibition Center Boston, MA
SAN DIEGO	Tues., Apr. 14	9:00 am – 12:00 pm 5:30 pm – 8:30 pm	San Diego Convention Center San Diego, CA
WEST MICHIGAN	Tues., Apr. 14	8:30 am – 11:30 am 6:00 pm – 8:00 pm	DeVos Place Grand Rapids, MI
MONTGOMERY COUNTY	Wed., Apr. 15 Thurs., Apr. 16	9:45 am – 12:45 pm 6:30 pm – 8:30 pm 9:45 am – 12:30 pm	Montgomery County Agricultural Center Gaithersburg, MD
INLAND EMPIRE	Thurs., Apr. 16	9:00 am – 12:00 pm 6:00 pm – 8:30 pm	Ontario Convention Center Ontario, CA
METRO DETROIT	Thurs., Apr. 16	9:00 am – 11:30 am 6:30 pm – 8:30 pm	Burton Manor Banquet and Conference Center
ORANGE COUNTY	Sun., Apr. 19	1:30 pm – 4:30 pm	Anaheim Convention Center Anaheim, CA
GREATER LOS ANGELES	Mon., Apr. 20 Tues., Apr. 21	1:00 pm – 4:00 pm 8:30 am – 11:30 am	Pasadena Conference Center Pasadena, CA
VENTURA/TRI COUNTY	Wed., Apr. 22	5:30 pm – 8:30 pm	Seaside Park Ventura, CA
PROVIDENCE	Sat., Apr. 25	1:00 pm – 4:00 pm	Rhode Island Convention Center Providence, RI
CLEVELAND	Sun., Apr. 26	1:00 pm – 4:00 pm	Wolstein Center Cleveland, OH
NEW JERSEY	Wed., Apr. 29 Thurs., Apr. 30	1:00 pm – 4:00 pm 8:30 am – 11:30 am	New Jersey Convention & Exposition Center Providence, RI
NASHVILLE	Sun., May 3	1:00 pm – 4:00 pm	Nashville Municipal Auditorium Nashville, TN

* Note: These dates are tentative and subject to change. Please visit www.uat.edu/nacactravel for the latest schedule.

THE APEX OF ROBOTICS & EMBEDDED SYSTEMS

MIGHT REVEAL THE SECRETS OF THE UNIVERSE

“A discovery of this magnitude can be compared to Columbus proving the world is not flat.”



Teleporting and time travel have long been the subject of science fiction writers and movie producers. However, The Large Hadron Collider (LHC) at the European Organization for Nuclear Research, or CERN, is about to change all that. The experiments at CERN will give scientists a glimpse into the vexing world of energy and the very creation of mass. By exploring the cosmic properties of energy and mass, scientists hope to find the “God Particle” - the missing piece to a comprehensive understanding of the universe.

The LHC at CERN is the world's largest and most powerful particle accelerator. It is the ultimate conglomerate of robotics and embedded systems comprised of a 27km ring lined with superconducting magnets and numerous accelerating elements that continually boost the energy and speed of particles traveling through the ring.

Two beams of particles traveling in opposite directions will bolt through the accelerator at .99999 times the speed of light. The internal pressure of the LHC is ten times less than that of the moon - eliminating friction and allowing particles in the accelerator to build enormous amounts of energy as they travel. Each proton will travel around the 27km ring over 11,000 times per second. At these speeds, steering the super accelerated particles around the ring will require an enormous amount of force.

In fact, controlling the particles requires a force that can only be generated by superconducting electromagnets. These magnets are made from coils of electric cable that efficiently conduct electricity without resistance or loss of energy through heat. This efficiency is accomplished by using super fluid helium to cool the magnets to -271.3 degrees Celsius - colder than outer space!

Once the particles reach speeds just under the speed of light, they will be smashed into each other, instantaneously generating temperatures 100,000 times hotter than the core of the sun. This reaction will, for a split second, recreate the conditions that occurred for fractions of a second after the Big Bang. Robotics and embedded systems and subsequent sensors throughout the LHC will measure, photograph and record the collisions providing scientists with information never before seen.

While this sounds impressive, what is it all for? What are scientists from all over the world trying to glean from colliding subatomic particles and scrutinizing the four-million-megabyte-per-hour stream of data it will produce? The answer: “They are looking for the secrets of the universe,” said UAT Professor of robotics and embedded systems, Ryan Clarke.

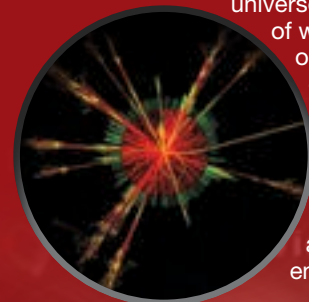
Numerous experiments conducted at CERN will investigate theories surrounding different dimensions, the creation of matter, time travel and teleportation.

For example, string theory suggests there are additional spatial dimensions other than Einstein's three dimensions of space. Scientists believe these other dimensions are detectable only when extraordinary amounts of energy are present. It is their hope that other dimensions will become observable when such concentrated amounts of energy collide.

“They are looking for the secrets of the universe.”

The subject of matter and antimatter will also be studied using the LHC. According to CERN, the Big Bang created equal amounts of matter and antimatter, but we only see matter now. Antimatter is like a twin version of matter, but with an opposite electric charge. So when antimatter and matter molecules meet, they annihilate each other, transforming into energy. Somehow, a tiny fraction of matter survived to form the universe we live in today. The question remains, what happened to the antimatter and why does nature prefer matter over antimatter?

Of the small amount of matter that comprises our universe, only 4% is made up of what is referred to as ordinary particles. These ordinary particles make up everything we see, from a bug on earth to an entire galaxy. The remaining 96% of matter is referred to as dark matter or dark energy.



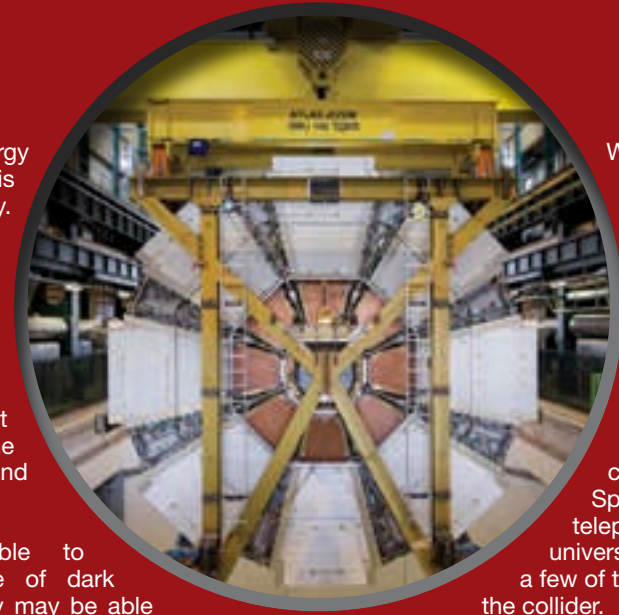
Dark matter or dark energy is not visible and is extremely hard to study. Currently, it can be detected only by its gravitational pull, for example the pull created by a blackhole. Studying the nature and property of dark matter and dark energy is one of the most vexing challenges in the field of particle physics and cosmology today.

If scientists are able to understand the nature of dark matter and energy, they may be able to answer questions pertaining to the possibility of other dimensions such as where matter goes after being sucked into a black hole. To answer this question and others like it, scientists are hoping to discover and study what is known as the “God Particle,” or as it is known by its scientific name - the Higgs boson.

“Discovering the God Particle will bring a level of clarity to understanding the very notion of creation never experienced by man before. Discovery of the Higgs boson would change the way we see the world forever,” said Clarke.

Scientists believe the Higgs boson or the “God Particle,” is the missing evidence in the Holy Grail of Physics - the Grand Unified Theory. This theory states that, at incredible levels of energy, all known forces will boil down to the same force. Scientists hope by studying the Higgs boson, which was present only in the brief fractions of a second following the Big Bang, they will have an understanding of all forces in the universe and how they affect mass - including people.

“The implications surrounding the discovery of the Higgs boson particle are huge. Its discovery will be the first step in developing Star-Trek-like technology,” said Clarke. He went on to say, “Depending on what they find, we (humanity) may be embarking on the real possibility of time travel and teleporting.”



When the LHC fires up later this year it will undoubtedly be one of the most significant milestones in modern science. It will be the largest and most powerful particle accelerator in the world and the data it will provide has many in the scientific community buzzing.

Speculation of time travel, teleporting and complete universal destruction are just a few of the rumors surrounding the collider. For those worrying about the destruction of the universe as

the result of the mini blackholes scientists hope to create, do not fear. Experts have assured us that it is just not possible.

“Black holes come in all sizes from gigantically big to infinitesimally harmless. The black holes that scientists hope to create at CERN won't even have enough energy to light up a light bulb,” said world renowned physicist Michio Kaku at UAT's commencement ceremony.

As for teleporting and time travel however, we will just have to wait to see what innovations the next generation of technologists can create with what this generation has discovered.

“Scientists believe the Higgs boson or the “God Particle” is the missing evidence in the Holy Grail of Physics - the Grand Unified Theory.”

For more information, visit www.uat.edu/robotics

HE COULD TELL YOU, BUT THEN HE JUST MAY
HAVE TO TERMINATE YOU.

ALEX EISEN

SR. COMPUTER SCIENTIST - US DEPT OF DEFENSE



U

Unless you've got a pretty hefty security clearance, it's difficult to discuss the day-to-day operations of UAT online adjunct professor Alex Eisen's primary profession.

Eisen is currently a Senior Computer Scientist for the U.S. Department of Defense, making him more than qualified to instruct UAT students on network defense and information security.

Utilizing the most innovative and advanced tools, Eisen's typical day with the Department of Defense consists of implementing and testing various strategies that pertain to penetration testing and vulnerability assessment. Mr. Eisen participates in highly classified, technologically advanced projects and contributes to government think tanks in an effort to develop proactive defense strategies that guard against cyber terror.

Eisen began playing with technology at an early age, short-circuiting elevator buttons at the age of four. To this day he continues to enjoy the "learning, playing with and breaking of" simple and complex systems. He applies this affinity for exploration to improving our national security as well as instructing UAT online students in network defense and information security.

This year marks Eisen's first foray into teaching, coming to UAT after meeting Network Security Professor Russ Rogers at DefCon. Eisen said he liked UAT's "energy, progressive thinking and the challenges the school takes on." He was also impressed the school offered the NSA Stokes Educational Scholarship. "It really illustrates UAT's commitment to information security," said Eisen.

The two-time recipient of the coveted Department of Defense-NSA Information Assurance Scholarship brings to UAT considerable graduate research spanning cryptography, mathematics, cyber law and IT management.

Eisen has worked with academia, military, various government agencies and numerous national labs in the fields of INFOSEC policy. Eisen has helped define procedures and standards for penetration testing, red teaming, large-scale incidence response, network monitoring, attack detection, malware analysis, deadbox and live forensics, federal council advising, emerging tech-recon, security software evaluation, testing and integration.

This bilingual grayhat-entrepreneur has presented his research at numerous civilian, educational and government conference forums. When not tending to UAT students or safeguarding the free world from cyber-villains, Eisen said he could be found back-country snowboarding, on a unicycle, in a game of capoeira, or "attempting something with oils and mixed-media art."

To this day he continues to enjoy the "learning, playing with and breaking of" simple and complex systems.

Start your education in Network Security by visiting www.networksecuritydegree.com



UAT students do community service during spring break.

While most students are sunning themselves on a beach over spring break, six students from UAT's dorm, Founders Hall, used their time off to make a difference in the Phoenix community.

Led by Associate Dean of Residence Life and New Student Programs Melanie Schopp, students Brandon Sample, Alex Kwan, Jake Garlie, Caleb Welsh, Jacob Sorensen and Kristopher Velez volunteered their time at three different Phoenix charities—CHEERS, Phoenix Rescue Mission and Chrysalis Domestic Violence Shelter—in an effort to contribute to multiple areas of need.

When asked about the experience, Garlie said, "It is amazing how many people are affected by homelessness, mental illness and substance abuse. We sometimes have this misconception that these problems apply only to the old crazy guy on the corner, when in reality it is young men, women and children who are dealing with these trying situations every day." He went on to say, "By getting involved, you really make a personal connection with these people—no longer are they just a statistic. These are real people with real problems and they need help."

Schopp said, "It is so important for these students to realize their role in the greater context of society and how technology can make them better people." One way the team did this was by volunteering at CHEERS. This charity helps people recovering from substance abuse and those suffering from mental illness reintegrate back into society.

"Teaching someone how to use the Internet or how to just use a computer is such an important step in the rehabilitation process. The Internet is their connection to the outside world—it has everything," said Velez. He added, "It was also fun to share something I love so much with someone who was eager to learn."

It is the hope of Schopp and the rest of the volunteers that next year will bring even more participants—increasing their impact on the community. "Have fun, make a difference, have a purpose—that's what it's all about," said Velez.



To see a list of community service projects visit www.uat.edu/campuslife



76.4 VOLUNTEER HOURS
 HELPED 15 PEOPLE LEARN ABOUT TECHNOLOGY
 DONATED 4 COMPUTERS
 SERVED 175 LUNCHES TO THE AZ HOMELESS
 STUFFED 2100 EASTER EGGS
 PACKAGED 3 CRATES OF COOKIES
 PLANTED 60 PLANTS

ANALOG SLACKERS

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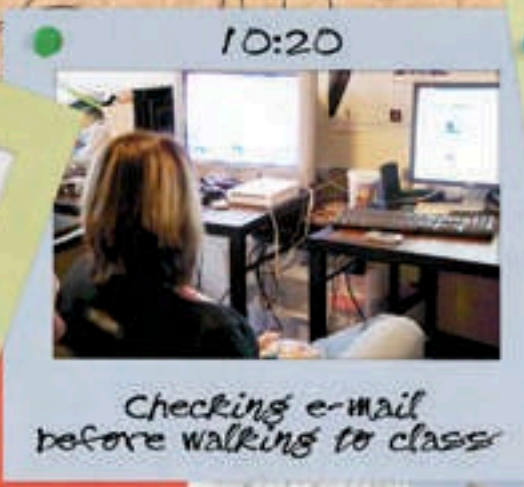
Artificial Life Programming > Technology Management > Computer Forensics > Game Programming > Network Engineering > Network Security > Software Engineering
 Web Architecture > Robotics and Embedded Systems > Digital Animation > Digital Art and Design > Digital Video > Game Design > Game Art and Animation

Follow current Founder's Hall student Marcy Tannahill, as she goes to class and enjoys life on the UAT campus.

A DAY of A DORM STUDENT. In The Life



Time to get up and get ready



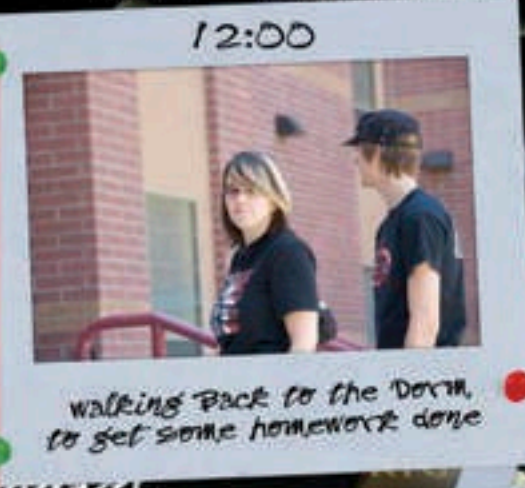
Checking e-mail before walking to class



Eng. 102 Discussed social experiments



here I am, checking e-mail in the commons area



walking back to the dorm, to get some homework done



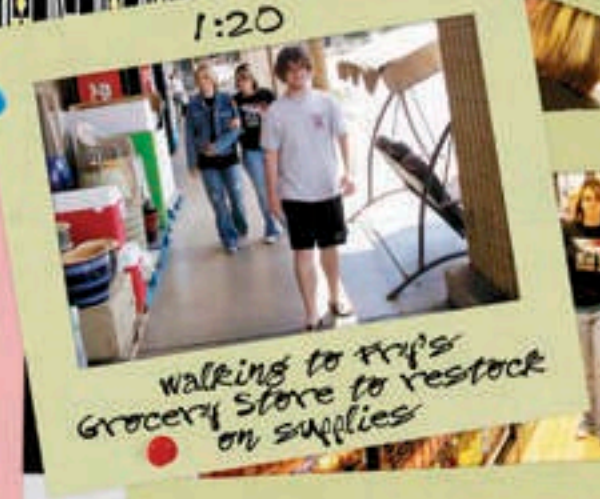
Watching a movie with some friends in Founder's hall theater



Back at school - Digital Animation class



Having lunch at the cafe



walking to Fry's Grocery Store to restock on supplies



Walked to Fry's Electronics to get a movie for tonight



Playing Video Games in my room



cooking dinner with some friends in the dorm kitchen



this is me in my anime club



off to sleep



cycle Safety Month

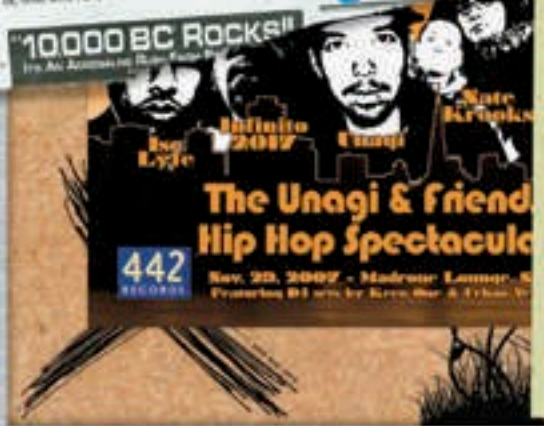
DANNY WAY



Are You Gaming? If so, you s



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To learn more about what goes on during a day in the life of UAT students, log onto www.uat.edu/reslife



U.S.

NETWORK SECURITY

The Relentless Attack by Foreign Enemies

The security of our nation is being threatened by a new generation of rogue hackers operating in foreign countries. Non-U.S. websites are being used heavily to target computer networks in the Defense Department and other U.S. agencies, successfully breaching hundreds of government networks. The Pentagon alone reported 79,000 hack attempts last year. The United States Department of Defense needs your help to protect the country against the clandestine operations of cyber terrorists.

"It's not just the Defense Department but a wide variety of networks that have been hit, including the departments of State, Energy and Homeland Security as well as defense contractors. This is an ongoing, organized attempt to siphon off information from our network systems," said one government official who wished to remain anonymous.

In addition to critical government services, telecommunication and financial services rely strongly on computer networks—the crux of their business interface with the world. Industry's dependence on these networks has made them susceptible to grave harm. Recall in 2000 Buy.com, eTrade, CNN.com, and Ditek Online Holdings (the number four online broker) were all attacked on the same day. The fallout resulted in millions of dollars in lost revenue and widespread panic. Unfortunately, most of the attacks are coming from beyond the U.S. borders, making the attacks difficult to police using conventional techniques.

The lack of cyber investigation agreements between the United States and other countries renders it difficult to bring those who breach national security to justice. In response, thousands of organizations, both public and private, are taking it upon themselves to look for individuals with the education and technological expertise needed to protect sensitive information from international hackers.

In testimony before the House Subcommittee, Secretary of Homeland Security Michael Chertoff once told the House "developing specialized expertise" is essential to combat cybercrime. "Experts must know how to handle electronic evidence to protect its integrity for later use in trial, as well as how to recover and analyze digital evidence from computers with hard drives that store gigabytes of data."

Evidence must be sought in a wide range of computer crimes, including theft, destruction of trade secrets or other intellectual property, and fraud. Forensic specialists must draw on a number of particular methods and skills to discover hidden data in networks and be able to recover deleted, encrypted or corrupted information. If proactive steps are not taken to develop expertise in information assurance, the U.S. will be fighting a war in which the enemy is far more advanced. Organizations must create and expand departments in computer forensics, network engineering and network security.

Companies are now realizing the importance of network engineers as they are needed to design and manage network infrastructures in an expanding global market. As a result, today's network engineer needs training in LAN, WAN, wireless infrastructures, server integration and the deployment of operating systems.

Network security technicians are desperately needed as well: Industries want individuals with the necessary skills to design and implement proactive defenses and strategies that guard against vulnerabilities. Organizations need people who can install, operate, manage, troubleshoot and secure an information technology infrastructure that provides reliable, scalable, consistent, responsive and secure enterprise network service.

Educational institutions have begun to offer curriculums with programs tailored towards building secure networks and combating cybercrime. However, very few universities have been designated as a Center of Academic Excellence in Information Assurance Education by the National Security Agency and the Department of Defense. This nationally recognized certification is given only to those elite schools that are exceptionally innovative and cutting edge in their approach to technology and security.

Technology leaders, like the University of Advancing Technology (UAT) located in Tempe, Arizona, have built sections of open networks to give students the opportunity to practice defending and even attacking constantly evolving networks. This practical approach is indicative of an exclusive learning process that gives students real life, real time experience practicing defense strategies. The experience also creates a fun and interesting environment for learning.

"The idea of being able to practice attacking and defending a network is very appealing to me," said Jessica Adler, a student at UAT. "I feel practicing on live networks is the only way to gain exposure to relevant problems facing network security. This practical, hands-on approach is why I chose UAT. Our methods and tactics are constantly changing and evolving, in real time, as the situation itself changes and evolves."

Practical application provides students the opportunity to hone their skills and develop familiarity with the most advanced and relevant practices in network safety.

"Companies are now realizing the importance of network engineers as they are needed to design and manage network infrastructures in an expanding global market."

"When I participate in online chats that address network safety, I find I'm usually the one that has had the most exposure to the latest in network security programs. UAT has consistently provided a curriculum that takes into consideration the constant evolution of software and network safety. That is why the NSA designated UAT as a Center of Academic Excellence in Information Assurance. For me, this certification is the reason I chose UAT for my education," said Joe Wiells, a UAT student.

Students graduating from institutions such as UAT receive the practical knowledge and education needed as a foundation to launch computer investigations; develop, design and manage secure networks; and create proactive defense strategies that guard against potential network vulnerabilities. Organizations need the help of highly specialized individuals with a working knowledge of information assurance to help safeguard sensitive information and networks.

Russ Rogers, a former government official and now a professor of network security at UAT, has worked with government agencies such as the United States Air Force, the National Security Agency and the Defense Information Systems Agency. He said, "When I was working for various agencies in the U.S. government, we had a difficult time finding qualified individuals who could help us create strategies that would block a hacker's access to sensitive information. So I was surprised when I discovered UAT and realized they took a very practical and real-life approach to information security education. UAT has been one of the early leading pioneers of information security which is ultimately the reason I chose to be a part of UAT. Today, graduates from the University are going on to pursue careers with the F.B.I., the C.I.A., and the NSA. I believe UAT will prepare students to win the war over international information piracy."

The U.S. government and the private sector are looking to employ a technically savvy generation. Organizations today need people with expertise in computer forensics, network engineering and network security. Schools that are certified as a Center of Academic Excellence in Information Assurance Education by the National Security Agency and the Department of Defense are being targeted by employers in all sectors of industry. As hackers become more sophisticated, organized, and numerous, employers are quickly realizing a necessity to hire competent, highly specialized individuals to counter the efforts of cyber terrorists.



"Organizations must create and expand departments in computer forensics, network engineering and network security."

LEARN MORE WWW.NETWORKSECURITYDEGREE.COM

POISON WIND

UAT ALUMNI USES THE POWER OF FILM IN HER FIGHT FOR JUSTICE



CAUTION RADIATION AREA

THE STORY:

"Poison Wind" brings to light a story of "a corrupt government, unconscionable greed and a policy of destruction aimed at the Aboriginal Homelands of Indigenous People from the 1940's until today," said Jenny Pond, Poison Wind producer and UAT alumni. She went on to say, "This film focuses on lives being destroyed by the horror of uranium mining and the effects of radiation."

Jenny felt it was important to produce a documentary that humanized the devastating effects uranium mining has on the people, livestock, water and agriculture in New Mexico and Arizona.

Submitting this film throughout the country and abroad, Jenny and her co-producer hope to raise the level of awareness concerning the hideous tactics used by mining companies and the peripheral devastation that results from these practices.

"I wanted the viewer to understand that the people being killed and infected by radiation were people of history, tradition and values, not unlike the viewers themselves."

PRODUCTION:

Producing "Poison Wind" created a lot of challenges for Jenny and her film crew. They were constantly battling the elements because much of their filming occurred outdoors and underground

"One moment it was bright and sunny, the next moment it was overcast and rainy. We were continuously analyzing and adjusting various scene lighting to effectively create moods through modeling and selective focusing. I don't even remember how many light kits, gels and filters we used to create our scenes," said Pond.

Jenny was adamant that the piece was correct from the standpoints of time period and culture. She applied color theory as an element of communication and expression in an effort to convey the rich history of the native people.

Pond said, "I wanted to create a parallel between the viewer and the people depicted in 'Poison Wind.' I wanted the viewer to understand that the people being killed and infected by radiation were people of history, tradition and values, not unlike the viewers themselves. It was important to personalize this film and have the viewer be able to associate a face with the victims."

Because the topic was important to Jenny and the subject matter so serious, final editing would be crucial to effectively illustrate the ideas and consequences associated with uranium mining.

"I wanted to create a parallel between the viewer and the people depicted in 'Poison Wind.'"

EDITING:

Editing is the final rewrite, the last explosion of creativity that shapes what the viewer ultimately sees, hears and feels when they watch a movie. Knowing this, Jenny asked fellow UAT alumni Keegan Ead to do the film's editing.

"I was honored to be part of something so important. I think from the start I understood the message Jenny wanted to convey and I used that message as the context for which I decided what and what not to edit."

Through editing and film, Jenny and Keegan were able to recreate situations and stories told to them by those actually affected by uranium mining.

"We needed to accurately portray the plight of these people without sensationalizing it. We felt it was important that we respected the lives and emotions of these people but at the same time, we needed to maintain the integrity of the film, so it became a delicate balancing act."

Using effective editing techniques, the team was able to authentically depict the truth while being cognizant of the emotional trauma endured by those involved.

THAT'S A WRAP:

"Poison Wind" has inspired cognitive awareness of uranium mining and the destruction it causes. As a result, the film has gained widespread notoriety among environmental activists and filmmakers. The dramatic use of imagery and light in conjunction with the powerful subject matter has made this film a potent tool for illustrating the destruction of a native population in the Four Corners region.

To learn more about UAT Alumni, go to www.uat.edu/alumni

POISON WIND TEAM

Produced by:

Executive Producer: Larry Muckerman
Producer: Jenny Pond
Co-Producer: Norman Patrick Brown

Cinematography by:

Carlos Chaves

Film Editing by:

Keegan Ead

Production Management:

Paul DeNigris

Other Crew:

Manuel Pino



TODD
ANDERSON

KEEGAN

EAD

MITCH

ABBOT

SCREEN
WARS

Screen Wars is a half-hour television show produced by UAT students designed to promote, educate and showcase Arizona filmmakers.

In each episode, three films go up against each other and viewers vote on which one is the best. The film with the highest number of votes moves on to compete with other contestants. The coup de grâce for the winner of *Screen Wars* is a coveted spot at the Phoenix Film Festival.

Screen Wars the show was nominated for six Emmys in five categories, including Arts/Entertainment-Program Special (with producer nods for Anderson, Frisbie and DeNigris); On-Camera Talent Performer/Narrator (two nominees); On-Camera Talent Program Host/Moderator; Arts Entertainment-Program Feature/Segment and Director-Post-Production or Technical Director.

2007 filmmaker of the year, Executive Producer and UAT professor Paul DeNigris chose three UAT alumni, Todd Anderson, Keegan Ead and Mitch Abbot, to collaborate on this private endeavor. Both Anderson and Ead have extensive experience in writing and producing short films. At one point the two of them produced and wrote 17 short films in only two months—not to mention their contribution to the 2006 *Screen Wars* winner, "Pirate Booty," produced when they were students together at UAT.

The production team was rounded out with the addition of UAT alumni Mitch Abbot. Abbot contacted DeNigris after watching the show's debut and expressed his desire to be part of the *Screen Wars* team.

"Abbot has worked on numerous 48-hour film challenges when he was a student at UAT and has always met his deadlines so I was very excited to work with someone with his experience and work ethic," said DeNigris.

Alumni stick together and win together

Commenting on the Emmy nominations, DeNigris said, "I guess it was to be expected. We (UAT) hold the digital video program and the students to a pretty high standard, so none of their success after graduation surprises me."

did you know...

UAT's alumni work for leading technology companies such as Microsoft, NASDAQ, LexisNexis, Electronic Arts (EA), Intel, Motorola and Neversoft

LEARN MORE ABOUT UAT ALUMNI AT www.uat.edu/alumni

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wifi

did you know...

Did you know 68% of UAT student applicants are accepted?

ALUMNI PROFILE
RYAN HOUGHTELLING
CLINT COMER

Two UAT Alumni Stream Live on Road Trip < At least that was the plan >

Originally, the idea of live streaming to Hollywood for the Winnies got two UAT alumni psyched. Their excitement stemmed from having the technical capabilities of doing it and from being the first to do it. UAT alums Ryan Houghtelling (class of 2002) and Clint Comer (class of 2004) decided to drive to Los Angeles for the Winnie Awards in late November 2007.



Ryan Houghtelling at The Winnies.

The Winnies are the online video awards for creators, producers, compressors and stars. The mission of the excursion was to videocast their road trip as well as the Winnie Awards ceremony.

Before leaving town, Ryan and Clint bought an Alltel EVDO card which was supposed to be a broadband wireless card to stream video. The card didn't end up operating as advertised. While they never got a great signal testing on the card at home, they were confident they would succeed with it on the road.

They were right. They had the best signal strength in the middle of nowhere and could manage the online stream with video and audio. Stopping at Starbucks became a regular thing and made their trip a nine-hour adventure versus a five-hour drive. There, they blogged and continued streaming audio and video to stay connected to their audience.

While on the road, they eventually had to switch over to Clint's T-Mobile phone using a Bluetooth pairing to maintain connection during flat spots for about a half hour. They had up to 700 people following them via Twitter and Ustream but then the trip became a calamity of mishaps and technical incompatibility and ended with a lesson learned.

Clint and Ryan had finally arrived at the Winnies in Los Angeles at a swanky club called Cine-space. They got rejected by the doorman at the club for not having proper attire. A quick change in the parking lot fixed that.

Entering the club they headed up the stairs and it became a red carpet event. Because they were the only ones casting at that time, their viewership for the V-log skyrocketed as they made their way upstairs. Just walking up the stairs, they hit 40 people within one minute. And then their laptop powered down. They hurried in to find an outlet so they could get their connection back, but after plugging in they could never get it to boot up again.

"It was the first time we'd ever tried to stream. It was a giant learning experience that ultimately failed but we know exactly what we need to do next time," said Houghtelling.

"Bottom line, it was fun as we were pushing the technology, but we pushed it right over the edge," said Comer.

To see Clint Comer's USTREAM channel, visit <http://www.ustream.tv/Clintus>

Clint Comer at Starbucks store #2142.

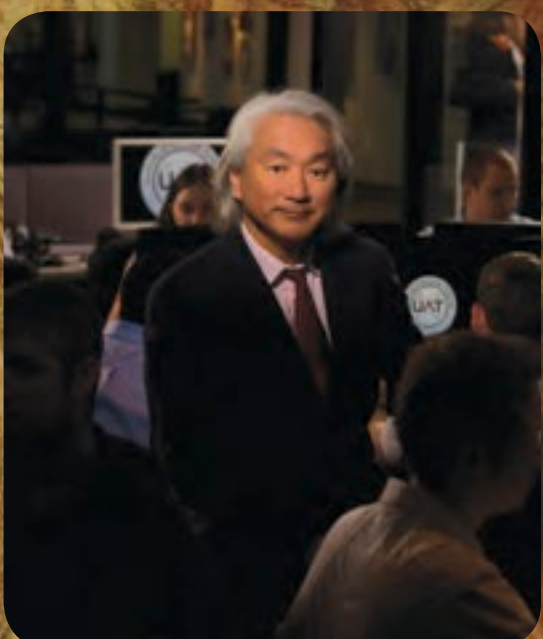


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The University Of Advancing Technology Announces Its Fourth Inductee Into The Leonardo Da Vinci Society For The Study Of Thinking

You've got to appreciate a guy who smashed atoms in his Mom and Dad's garage as a teenager. Most of us just smashed aluminum cans for the recycle bin, but not Dr. Michio Kaku. Starting at an early age, Michio cut his teeth learning physics from none other than Edward Teller, the father of the hydrogen bomb, which laid an excellent foundation from which Michio co-developed string theory. Now, in his "spare time" he attempts to mathematically define Einstein's theory of everything. However, "sparetime" is a very relative term.



syndicated and globally heard radio programs that dance across the spectrum, covering everything from black holes, environmental space travel issues, war, peace, robotics, SETI, space travel, all while keeping the future of science as the primary focus.

Dr. Michio Kaku was the 2008 inductee into UAT's distinguished Leonardo da Vinci Society for the Study of Thinking. Dr. Kaku delivered a captivating keynote address during commencement activities at UAT on April 17 and was awarded the Da Vinci Medallion in recognition of his ongoing contributions to humanity on April 18.

Between teaching theoretical physics, hosting globally broadcast radio and television shows, cranking out bestsellers and academic papers, this super-geek has a pretty full plate. Dr. Kaku is definitely the kind of guy you'd like to listen to for hours, a formidable thinker with a charisma that's captured the attention of fans worldwide.

"At UAT we strive to not only provide an enriching educational environment, but to continue to explore innovations and manners of thinking that will impact mankind's future. With this in mind, we are honored to present such an eminent physicist and futurist as Dr. Michio Kaku with the Da Vinci Medallion," said UAT founder Dominic Pistillo.

Dr. Kaku's silver locks and smooth demeanor are a familiar sight to anyone who has ever watched the Discovery Channel, where he has hosted several popular programs revolving around scientific and futurist issues. Dr. Kaku has the uncanny ability to explain the confusing world of theoretical physics in a way that anyone can understand, a talent probably acquired during his thirty years of teaching physics at the City University of New York, where he holds the Henry Semat Chair in Theoretical Physics. Dr. Kaku also hosts *Explorations* and *Scientific Fantastic*, two nationally

popular programs that dance across the spectrum, covering everything from black holes, environmental space travel issues, war, peace, robotics, SETI, space travel, all while keeping the future of science as the primary focus.

Dr. Kaku is the fourth recipient of the honor since the creation of the society in 2005, joining a growing and distinguished list of previous inductees: Dr. Edward de Bono, preeminent authority on teaching thinking as a skill; Dr. Margaret Wheatley, credited with establishing new approaches to how we contemplate organization; and renowned physicist and systems theorist Dr. Fritjof Capra.

www.uat.edu/davinci • www.davincithinking.org

RAY KURZWEIL IS COMING TO UAT IN 2009



When Ray Kurzweil was just 17, he programmed his computer to analyze the patterns in musical compositions by famous composers and then he had the computer compose original melodies in a similar style. This was his first project involving pattern recognition, which Dr. Kurzweil described as "that part of the AI field where we teach computers to recognize abstract patterns, a capability that dominates human thinking." From this project he went on to develop and receive recognition for numerous advancements in the field of Artificial Intelligence.

Ray Kurzweil was inducted in 2002 into the National Inventors Hall of Fame, established by the U.S. Patent Office. He received the \$500,000 Lemelson-MIT Prize, the nation's largest award for invention and innovation. He also received the 1999 National Medal of Technology, the nation's highest honor in technology, from President Clinton in a White House ceremony. Kurzweil has also received scores of other national and international awards, including the 1994 Dickson Prize (Carnegie Mellon

University's top science prize), Engineer of the Year from *Design News*, Inventor of the Year from MIT, and the Grace Murray Hopper Award from the Association for Computing Machinery. He has received twelve honorary doctorates as well as honors from three U.S. presidents. In addition, he has received seven national and international film awards. Dr. Kurzweil's books include *The Age of Intelligent Machines*, *The Age of Spiritual Machines*, and *Fantastic Voyage: Live Long Enough to Live Forever*. Four of Ray's books have been national bestsellers and *The Age of Spiritual Machines* has been translated into nine languages and was the #1 bestselling book on science. Ray Kurzweil's new book, published by Viking Press, is entitled *The Singularity Is Near: When Humans Transcend Biology*.

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www.uat.edu/meetnewfreshmen



Gale Lane

Major: Network Security/ Computer Forensics
Home Town: Mt. Washington Valley, New Hampshire

So far this year has been great. I really enjoy my classes—they are all technology focused. Originally, I looked at UAT for Game Design but when I saw the Network Security and Computer Forensics majors I switched. Now I get to learn about things like hacking and attacking networks. I also really like that all the professors are engaged in the industry.

After graduation, I would like to work for a private security consultant and do penetration testing for them. As for right now, lots and lots of web design at least while I'm in school. As long as I'm not stuck with systems administration I will be happy and that is one of the reasons I chose to get my education at UAT.



JD Cerrince

Major: Digital Animation
Home Town: Anaheim, California

My first year is going really well. I first heard of UAT at a college fair in California and discovered they had a really good Game Design program so I decided to check the school out. When I got here, I was really impressed by the campus and how nice everyone was. I knew this was the place I wanted to go.

I eventually switched to my current major, Digital Animation, because I really wanted to specialize in digital animation for character models and once I saw the program here, I switched.

After I graduate I want to go straight into the industry. Ideally, I will have a junior modeling position at the time I graduate and will hopefully be able to move up from there.



Evan Hjelmstad

Major: Software Engineering
Home Town: Sisters, Oregon

I'm really enjoying my first year here at UAT. I'm impressed with the amount of one-on-one instruction that is available, especially if you need help in a particular area.

The dorms are great—it's like a small community, which I really like. I was worried about going to a smaller school because I wanted that college experience but with how involved the student government is, there is always something going on.

After I graduate I would like to work for a high-tech company like Google or Microsoft or somewhere in Silicon Valley so I can pursue an MBA at Stanford.

The UAT Bookstore, located just off the main floor computer commons, stocks all the books, supplies and study materials you'll need. It's also the world's only known source for rare, highly sought-after UAT logo gear. Shirts, hats, pens, glasses, mugs and more. I tell you, more. It's all here, waiting to help you get your geek on. Stop in if you're on campus or log on to www.uatstore.com to shop online.

Way more than just a bookstore

Geekalicious

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ALPHA GEEK

g33k

THINK.

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www.uatstore.com

WHAT YOUR G33K I.Q.?



1. Stephen Hawking was born 300 years after the death of:
 - a) Sir Isaac Newton
 - b) Nostradamus
 - c) Sir Thomas More
 - d) Galileo
2. When Luke Skywalker and Han Solo take Chewbacca to the prison cells, Luke says he has a prisoner transfer from cell block:
 - a) Omega-3
 - b) 451
 - c) 1138
 - d) 1984
3. What is the answer to life, the universe and everything?
 - a) Twinkies
 - b) Existential Displacement Theory
 - c) 42
 - d) Deep Thought
4. In Firefly, all the Alliance Officer and soldier uniforms are leftovers from:
 - a) The Red Planet
 - b) Space Balls
 - c) Starship Troopers
 - d) Battlefield Earth
5. Approximately 2% of the current Linux kernel was written by:
 - a) David S. Miller
 - b) Linus Torvalds
 - c) Andrew Tanenbaum
 - d) Ari Lemmke
6. Who began a long-running debate with the correct answer to #5?
 - a) David S. Miller
 - b) Linus Torvalds
 - c) Andrew Tanenbaum
 - d) Ari Lemmke
7. The role of Han Solo was turned down by which of the following actors?
 - a) James Caan
 - b) Burt Reynolds
 - c) Al Pacino
 - d) All of the above
8. How old was Bill Gates when he and Paul Allen founded Traf-O-Data?
 - a) 14
 - b) 17
 - c) 21
 - d) 40

[GEEK TEST]
FINISH THE TEST AND FIND OUT
YOUR GEEK IQ AT WWW.G33KTEST.COM



Student blogs



Jacob's Blog

Hey all, I'm from the grand state of IOWA!! *cough* Anyways I found this university by going to yahoo.com, typing in Game Degree, and clicking search. There were a bunch of hits but the first one I tried was the first link that wasn't a paid link. That just so happened to be UAT and the website instantly caught my attention and I fell in love with the school without really knowing what it was about. But there was something unique about the school.

When I looked at the websites of other schools, it didn't seem like they were as full-hearted or dedicated to technology like UAT. Then, when I finally managed to make the drive and visit during a Full Access event I instantly fell in love with it—the people, the school, how it was different from my generic image and experiences with colleges, it was all wonderful. Now that I'm a Student Ambassador I get to work at the school I love and with the people that I love—it's wonderful. Plus I get to give back to the school that is giving me so much.

Visit Jacob's blog at
www.uat.edu/meetjacob



Sara's Blog

My name is Sara Root. I was born on February 16th, 1989 in Los Gatos, California, though I consider my hometown Phoenix, Arizona, since I've lived in Arizona for almost eleven years now.

I am a second semester student at the University of Advancing Technology, working towards a Bachelor of Art degree in Game Art and Animation. I'm planning on graduating the Fall semester of 2009 or the Spring semester of 2010. What I enjoy most about UAT is the community. Currently, UAT's population is larger than my high school's was, so it's very refreshing to see that everyone is on a first-name basis between the students, faculty and staff. I also enjoy how different the classes are from an ordinary university, as well as the variety of career opportunities provided. It's obvious that the staff and faculty at UAT truly care about its students, and that may be what turns me on about the school and why I love being a student ambassador for the university.

Visit Sara's blog at
www.uat.edu/meetsara



Chris's Blog

Since September 2005, I've been attending UAT as a Game Programming major. I'm originally from Foxboro, Massachusetts.

I'm a huge baseball fan and love the Red Sox. I've been a gamer for years and have a passion for the game industry. My favorite games include Zelda, Mario Galaxy, God of War, Metal Gear Solid 2, and many others. I currently have only a couple semesters left here at UAT. After that, I'd like to work in the industry as a gameplay programmer.

At this point, I don't really have a preference as to where I work, but my dream jobs would be Blizzard, Nintendo, Harmonix or Bungie. I'm a pretty easy-going guy. If you have any questions, feel free to email me at chrbossa@uat.edu.

Visit Chris's blog at
www.uat.edu/meetchris



CRIME SCENE FORENSICS

The New Fight in the Digital Age



The past few years have been marked by the significant proliferation of cyber crimes in the U.S. Previously, cyber criminals were characterized as young males, who never did any real harm. Their crimes involved the unauthorized modification of a company's website, embarrassing website owners with the ease of security penetration.

Today, however, cyber crime is the domain of organized crime and sophisticated fraudulent schemes. Hackers aren't breaching networks for bragging rights; they are hacking for financial gain and the dissemination of sensitive information.

IBM released a report that found 19 of the top 20 phishing attacks in 2007 were targeted towards major banks. Instead of crashing entire systems, hackers now realize the value of using secretive malware to gain control of a bank's information system and use it to commit other fraudulent crimes. Chief Technology Officer for IBM Internet Security Chris Rouland said, "The malware authors realize they are better off as parasites than they are killing their hosts."

Some criminals are utilizing peer-to-peer programs like Limewire to search the computers of those in the financial sector, gaining access to federal income tax returns and credit reports that have been stored on private networks. Hackers sell the information or use it themselves to open online credit accounts to purchase merchandise that will later be sold on the streets.

The evolution of cyber crime has also grabbed the attention of lawmakers and the FBI. Issues of espionage and counterintelligence have become a threat and the U.S. government is taking proactive steps to catch and prosecute those guilty of stealing government information. FBI Assistant Special Agent Dennis Baker said, "The FBI is wholly committed to investigating those cases that involve espionage, sabotage or unauthorized activities related to foreign counterintelligence."

According to an article published on the Department of Justice's website—the U.S. Attorney's Office, FBI, Immigration and Customs Enforcement (ICE), and investigators from the Department of Defense, NASA and the Department of Commerce have formed an Export Enforcement Task Force to investigate and prosecute cases involving theft or illegal export of sensitive technology.

In addition, President Bush is reportedly ready to unveil a \$6 billion plan to create a National Security Agency for American networks. While this is certainly a step in the right direction, the problem isn't necessarily with funding, it's finding people with the skill set needed in the arena of computer forensics.

"There simply are not enough people to do this type of work," said Scott Pancoast, a certified forensic computer examiner with the Washington State Attorney General's Office.



"Forensics has evolved from merely imaging a hard drive to a world that involves just about anything that can retain digital data," said UAT's professor of computer forensics, Diane Barrett. "So developing investigators with core knowledge of computer forensics is crucial if we, as an industry, are to adapt and create solutions for new and even more sophisticated crimes."

The key component to any cyber crime investigation is being able to discover and create a chain of evidence that illustrates and proves a suspect's involvement in a crime. However, those involved in cyber crime syndicates usually never meet, never see each other and never make physical contact with one another. So, securing physical evidence that links them to a crime is challenging.

As a result, computer forensic specialists are needed to expose the connection between a suspect and a crime. To do this, experts must be able to reveal the contents of hidden files, access the data of encrypted files, obtain and document digital information, determine how information was compromised and provide expert testimony concerning acquired information.

The need for forensic experts in the information security sector is growing and is expected to continue growing. According to several labor forecasts, there will be a shortfall of nearly 50,000 jobs within the information security profession. As a corollary, the need for education in related fields is expected to grow as well.

"One of the challenges in computer forensics is the ability to create and develop software that can analyze new technology as it comes out," said Barrett. "The only way for students to develop the necessary skills is through instruction from industry experts coupled with hands-on experience. We give them both at UAT," she added.

However, software and malware proficiency is not the only skill set employers are looking for as that is just half the battle. **"Employers are looking for people with converging security capability,"** said Barrett.

"In addition to technical expertise, educators need to develop forensic investigators with knowledge of forensic law, prosecution protocol and who can provide expert testimony. We need to develop complete forensic investigators if we are going to combat and prosecute those guilty of cyber crimes."

Governments and organizations all over the world are looking for employees that have practical application experience and the education needed to effectively fight cyber crime in all forms. They need forensic specialists that are able to effectively implement and maintain forensic tools in the detection, notification, isolation and resolution of issues impacting information acquisition. In addition, they need people who can create processes to follow a trail of digital evidence through an information system and testify to its validity in a court of law.

for more information visit www.uat.edu/computerforensics

WHAT'S HOT

HOT



ARTIFICIAL LIFE

PHILL MILLER
Instructor, Software Engineering
BA, Arizona State University

Blue Brain-A super computer with thousands of microchips programmed to act just like real neurons in the brain. The computer replicates cellular events occurring inside the mind and Blue Brain scientists are confident that, at some point in the next few years, they will be able to start simulating an entire brain.

Artificial Consciousness-Machine consciousness is currently a heterogeneous research area that includes a number of different research programs. For example, some people are working on the behaviors associated with consciousness, some people are modeling the cognitive characteristics of consciousness and some people are interested in creating phenomenal states in machines.

Artificial Life-Two artificial DNA "letters" that are accurately and efficiently replicated by a natural enzyme have been created by U.S. researchers. Adding the two artificial building blocks to the four that naturally comprise DNA could allow wildly different kinds of genetic engineering. Eventually, researchers may be able to add them into the genetic code of living organisms.

NOT

Tamagotchi, Furby, RoboSapien and Roboraptor

HOT



NETWORK SECURITY

RUSS ROGERS
Professor, Network Security
Handle: VERTIGO
MA, University of Maryland
BA, University of Maryland
AA, Community College of the Air Force
Certified: CISSP, NSA IAM & NSA IEM

Identity Protection is the big news in information security these days. Everyone from your neighbor to the Federal Government has started realizing the need to protect those pieces of information that identify you.

While the Federal Government has really started stepping up legislation protecting individuals, commercial "products" that lock down a person's medical, financial and personal history are recent developments that are taking on a life of their own.

NOT

Manual patch and update processes for computers around the world are going the way of the dinosaur. Many companies, administrators and individuals have always relied on a manual process to update patches to the operating system or applications because they didn't entirely trust the vendor.

The number of exploits for a variety of operating systems and applications have become more than most administrators and users can handle alone. Automating the patch and update processes ensures that the computer receives the protection as soon as it's released, not just when the operator gets a few spare minutes.

WHAT'S NOT

HOT



ROBOTICS

RYAN CLARKE
Professor of Robotics
Handle: Lost
BS, Arizona State University

VFDs & OLEDs - the brightness of VFDs, and the low power requirements for OLEDs.

Low power uControllers - uControllers that can conceivably run for 5 years or more on a single battery!

Bionic lenses - print your circuits directly on your contact lenses.

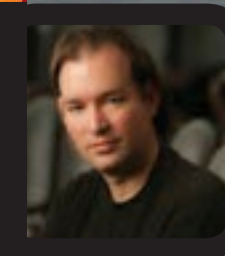
FPGAs - hardware description languages for creating circuits with code!

Robotics careers - health care and military/security robotics are booming with activity in robotics circles.

NOT

Power hungry circuits, small low-power LCDs. Everything is getting better looking, yet requiring less power!

HOT



GAMING

MICHAEL EILERS
Instructor, Game Design and Production
BA, Ohio University

SteamWorks, Valve's open-source toolkit for making networked, auto-updated and community-driven games.

WiiWare, indie games for the Wii (over 100 games in development) with a cheap dev kit that is easy to use. **Games on the iPhone** (duh!)—everyone from EA to PopCap to indies are making them.

NOT

First-Person Shooters—market saturation has generated a glut of these with more on the way, but no new gameplay.

Physics Cards are officially toast; this functionality is being wrapped into current and next-gen graphics cards.

Indestructible walls and narrow hallways are out; huge, open-world designs and destructible environments are going to become the norm.



Do You Know What's Hot & What's Not?
If So, Let's Hear It. Email us at
whwn@uat.edu.



READY SET GO

The UAT admissions process can begin as early as your sophomore year in high school. This can be a great benefit to you, since it allows you to create a relationship with a representative from the University, who can help guide you every step of the way. In addition, applying early and ensuring acceptance:

- > Gives you access to UAT's Intranet.
- > Gives you access to your enrollment coordinator so they can help you and your family with this decision.
- > Keeps you connected with campus events and news.
- > Helps you become part of the UAT community.

Apply online today at <http://www.uat.edu/admissions> or request more information at <http://www.uat.edu/requestinfo>

Who's admitted to UAT?

UAT's Admissions Office is looking for that student who is not only smart, but who will also be a fit with our geek culture.

Students that are accepted are passionate about learning in an environment designed around technology. For instance, a student who has been building websites, programming or building advanced robots is of more interest to UAT Admissions than someone who has not demonstrated aptitude and only has good test scores.

So...what's Next?

Prospective students may apply online at www.uat.edu/apply. Admissions requirements and the online application are both found on this page.

Soon after your application has been received and reviewed by our Acceptance Committee, you will be notified of your acceptance status. If you need help or advisement with the admissions process, or if you just have questions please contact our communication center at 877.UAT.GEEK.

Do you dream about changing the world?

Do you dream about creating innovations? Do you believe in your heart you could do it better if you just got the chance?... what about an average or better SAT score? **Then you're the right fit for us!**

if you're a 4.2 Student

with incredible SAT's but you don't like working on teams and don't like exploring technology, UAT might not be right for you. Our school is a collaborative and innovative university, focused on advancing technology.

Fall 2008 Semester

Semester: September 8 – December 19, 2008
Fall IT Support Break: October 24, 2008

Fall 2008 Scholarship Deadlines

- Scholarship Deadlines for First-Time Entering Students for Fall 2008
- > Application Deadline for Community scholarships: May 12, 2008
 - > Privately Sponsored or Board-Sponsored scholarships: May 12, 2008
 - > Enrollment Deadline for Community, Privately Sponsored or Board-Sponsored scholarship recipients: July 7, 2008
 - > Document Submission Deadline for Academic scholarships: September 8, 2008

2009 Dates & Deadlines

Spring 2009 Semester
Semester: January 12 – May 1, 2009
Spring Orientation: January 8, 2009
Spring Break: March 9-13, 2009

Spring 2009 Scholarship Deadlines

- Scholarship Deadlines for First-Time Entering Students for Spring 2009
- > Application Deadline for Community scholarships: September 8, 2008
 - > Privately Sponsored or Board-Sponsored scholarships: September 8, 2008
 - > Enrollment Deadline for Community, Privately Sponsored or Board-Sponsored scholarship recipients: November 10, 2008
 - > Document Submission Deadline for Academic scholarships: January 12, 2009

HELLO
HOW ARE YOU?
WHAT DO YOU TEACH?

MEET THE FACULTY

MEET THE ENTIRE UAT FACULTY AT
www.uat.edu/facultybios

One of the hallmarks of UAT is a faculty who are as passionate about teaching as the students are about learning. UAT instructors engage and challenge students, whether in technology-based courses or general studies courses, to help them explore their passions and achieve their full potential.



KURT SIGMON Professor:

Computer Forensics; Network Engineering; Network Security; Software Engineering; Information Security.
B.S./ B.A from the University of Kansas. MS ECE from Arizona State University

Kurt teaches both online and traditional courses at UAT. In addition to his immense amount of teaching experience, Kurt also worked at Intel for 13 years as an internal technical training engineer for manufacturing technicians. Sigmon is a **Microsoft Certified Systems Engineer** and was instrumental in developing Intel's multinational online services.

Mr. Sigmon has been an enthusiastic teacher for years and has a knack for combining his interests with teaching. For example, his love for music resulted in him becoming a professional musician and then a music teacher for more than 20 years. Similarly, his affinity for technology and technology security led him to UAT where he shares his years of experience with eager students.

"The thing I noticed immediately when I started teaching at UAT was the caliber of students the school was attracting. The students here have a wide range of interests and knowledge and have so much passion for technology."



JONATHAN HARBOUR Professor:

Game Design; Game Programming; Software Engineering; Artificial Life Programming; Game Production.
B.S. from DeVry University

Jonathan has taught at UAT for three years and has instructed both traditional and online classes. He brings with him a vast knowledge of technology and software engineering. He worked with numerous game studios, medical software companies, DMR, Fujitsu and Honeywell. Jonathan has also published over 15 books on video game technology and programming, as well as books on programming the Nintendo Game Boy Advance, making modifications to the Xbox, and game programming in several computer languages, including C, C++, DarkBasic and Visual Basic. However, his passion for game development is one that has been with him as long as he can remember.

"I tried to write games as soon as I got my first computer. The problem, though, was that there weren't any schools teaching game design, so I had to figure out a lot of things on my own. I wish there was a university like UAT when I was in school."

"The best part about UAT is that I get to create classes that push farther and farther into game development technology-the classes are constantly evolving. Some of the classes I teach today did not exist just a couple of years ago."



MARK KIRCHNER Professor:

Network Engineering; Network Security; Robotics and Embedded Systems; Software Engineering; Information Security.
B.S. from Arizona State University

Mark's impressive résumé illustrates his vast knowledge of and experience in network engineering. He has worked on and developed IC tests, network encryption, engineering flight simulations, disk files, GPS, TDMA radio, embedded real time OS, proprietary network protocol, GPS vehicle applications and application-specific compilers. He is also a certified **Sun Microsystems Java 2 Programmer**. The most well-known product that Kirchner has worked on is Motorola's Global Positioning System receiver. Most people will recognize this as the GPS receiver currently used by GM in OnStar.

Recently, Mark and his students submitted a patent application for a program that allows third parties to authenticate electronic documents.

"This was a great opportunity to illustrate how UAT creates new ideas and fosters their development. It was also a way to expose students to the idea of intellectual property and take them through the intellectual patent process."

STARFLIGHT RETURNS AND IS BETTER THAN EVER!!!

STARFLIGHT® The Lost Colony

Associate UAT Professor and Lead Designer, Jonathan Harbour and his student team have created a new sci-fi intergalactic thriller based on the 1980's cult classic, **Starflight**. They have created a 2D game that incorporates an established story line from an old classic with the latest in combat systems, interface displays, and game-play features.

Starflight: The Lost Colony plays out a scenario of a rogue earth colony vessel sucked into a wormhole and thrust into a vast region of the universe not yet explored. The wayward colonists hail from the British Isles and add their unique Britannic heritage to an intriguing story line.

The earth colony space ship, Noah 3, was launched into space in 3456 A.D. The vessel was later attacked and forced to flee into a wormhole.

Badly damaged and losing life support, the colonists of Noah 3 desperately searched for a habitable planet to make their crash landing. Captain Meriwether discovered a suitable planet hidden by a large star

and gave the order to abandon ship as the ship's reactors were on the verge of complete destruction. Soon after abandonment, the mother ship disintegrated.

Once on the new planet, the new colonists realized a new uninhabited world that was teeming with wild life. It is here the new inhabitants would give rise to a new society and start over in a completely fresh and untouched world called Myrddan.

Over 1000 years later, the inhabitants of Myrddan have once again achieved space flight. However, rumors of war and death permeate throughout the galaxy. A great evil has returned and only the humans of Myrddan stand in the way of absolute tyranny.

Players can choose from three different professions and explore over 400 planets in 100 star systems. Trade items, mine minerals and capture life forms, all for the sake of profit and science. Players can upgrade their ship and interact with numerous alien races, crush them with

DESIGN/STORYLINE
Steve Wirsz
Steve Heyer
Jacob Medlin
Jonathan Harbour

CONCEPT ARTWORK
Nick Busby
Ronald Conley

3D ARTWORK
Nick Busby
Andrew Chason

MUSIC
Chris Hum
Todd Spencer
John Howarth IV

2D ARTWORK
Andrew Chason
Ronald Conley

C++ PROGRAMMING
Dave Galkins
Justin Sargent
Jonathan Ray
Matthew Klausmeier
Jonathan Harbour
Keith Patch
Scott Idler

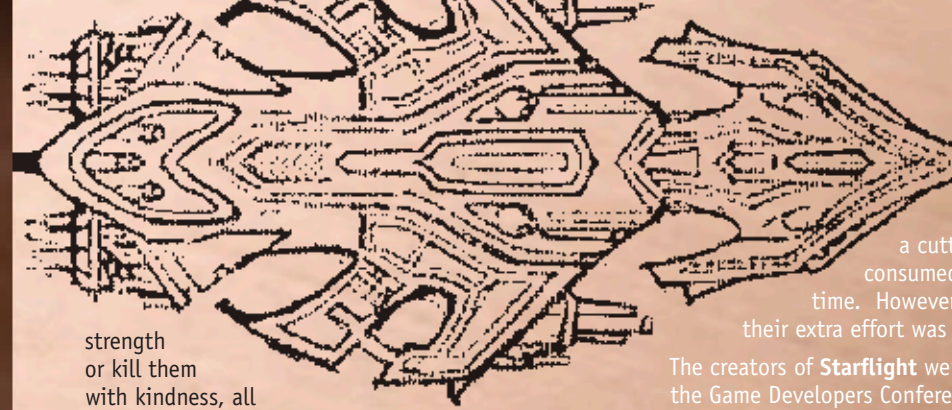
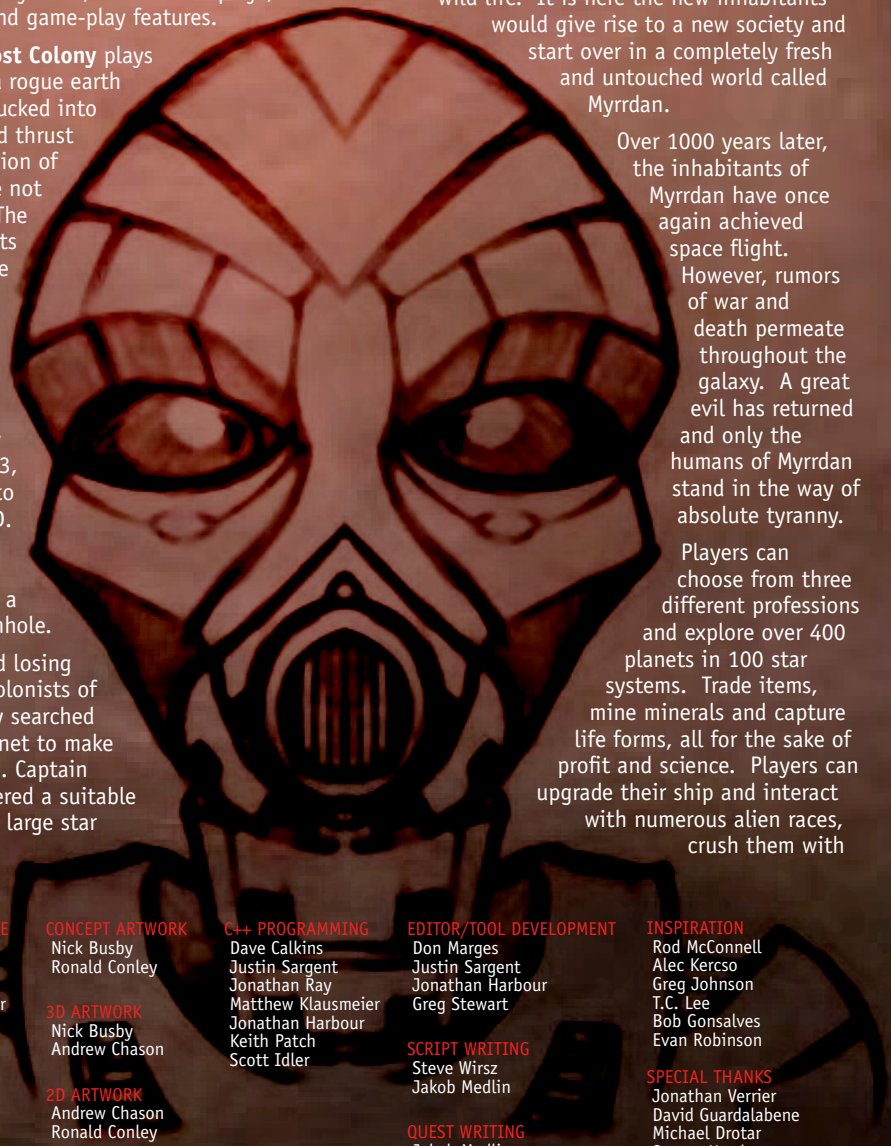
EDITOR/TOOL DEVELOPMENT
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Justin Sargent
Jonathan Harbour
Greg Stewart

SCRIPT WRITING
Steve Wirsz
Jakob Medlin

QUEST WRITING
Jakob Medlin
Justin Sargent

INSPIRATION
Rod McConnell
Alec Kercso
Greg Johnson
T.C. Lee
Bob Gonsalves
Evan Robinson

SPECIAL THANKS
Jonathan Verrier
David Guardalabene
Michael Drotar
Steven Kottke



strength or kill them with kindness, all with the press of a button.

The creators of **Starflight: The Lost Colony**, take a visit to the past, incorporating modern elements in just the right proportion. UAT students have tastefully acknowledged the original and boldly forged a galactic path years beyond the previous version. The result: A modern video game that pays homage to the original 1986 **Starflight** and the 1988 **Starflight II: Trade Routes of the Cloud Nebula**.

"A fan of the original game will look at the game and say, 'wait a second,' but as soon as they play it for two minutes, they will be instantly familiar with it," says UAT associate professor Jonathan Harbour.

"I guess part of what I've learned during this time is how to give what needs to be done, but not go overkill," said student programmer Keith Patch.

The concept behind **Starflight: The Lost Colony** was to tactfully incorporate characteristic elements of the original, with the very latest in graphics, game design and programming. The result is a video game that ignites the excitement of a cult classic, while at the same time creates a gaming experience on par with the most relevant video games of today.

"It's definitely been a programming improvement. It's not really recognizable from what it was as far as graphics and such go," said Patch.

Keith devoted many extra hours working with a custom-built game engine (derived from C++) which allowed drastic improvements to the interface displays, combat systems and game-play features.

The team was able to build upon the original game's planetary interaction capabilities by modernizing and expanding the player's interactive environment. This created a more interesting planetary surface as now players can interact directly with aliens and planetary environments.

"We want to have a fully working game that has six hours of game-play, that fans of the original will appreciate and enjoy, and will say, 'This does honor the original IP.'"

What was supposed to be a two-credit class, meaning four hours of work during the week, turned into a cutting edge project that consumed most of the team's time. However, as they found out, their extra effort was not in vain.

The creators of **Starflight** were selected to attend the Game Developers Conference in San Francisco in February. Before heading west however, the UAT team doubled the size of the existing universe already populated with 400 named planets and five alien species.

Expanding the size of the existing universe gave this UAT project team the opportunity to delve deeper into Celtic and Gaelic folklore, allowing them to build greater complexity into the story line.

"We want to have a fully working game that has six hours of game-play, that fans of the original will appreciate and enjoy, and will say, 'This does honor the original IP,'" said student project lead Matthew Klausmeier.

Their extra effort certainly paid off. UAT sent the student team and lead Harbour to the conference giving the team a chance to showcase their work in front of the industry's heavy hitters. Companies like Big Huge Games, Bungee,

Blizzard, 2K, Sony, Lucas Arts, RealTimeWorld and Ubisoft all showed interest in **Starflight** and more importantly, they showed interest in its creators.

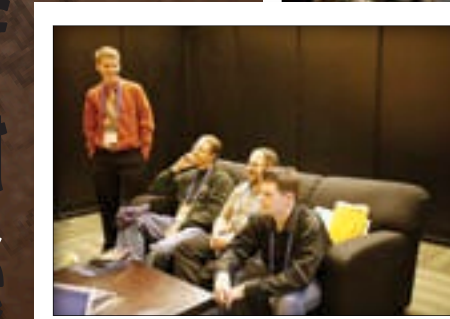
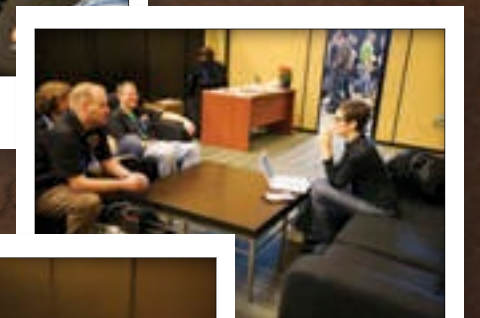
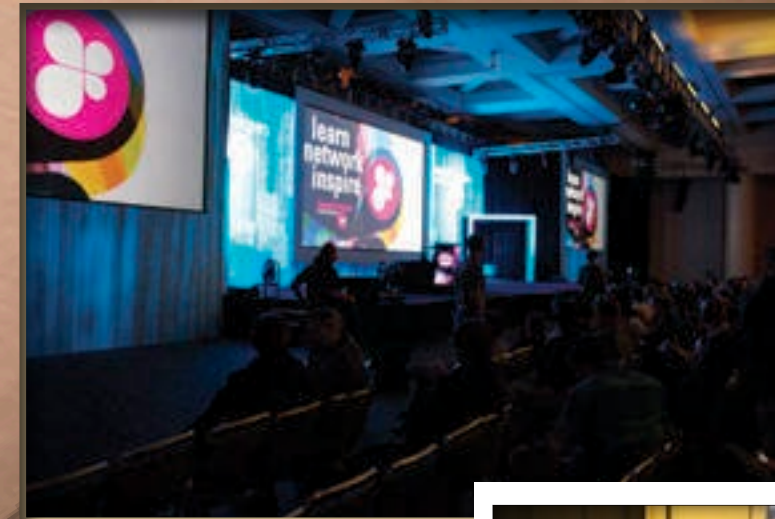
As a result of GDC and the attention **Starflight** garnered, team member Matthew Klausmeier received an interview with 2K and is currently negotiating the specifics of a job offer. In addition, programmer Justin Sargent was hired by Big Huge Games and the company asked Keith Patch to take a programming test, which is the beginning step in landing an interview.

"Creating **Starflight** and bringing it to GDC really gave our team the opportunity to showcase our abilities - and from what I can see, we have had an incredible response," said Klausmeier.

Part of the reason UAT sponsors teams to go to GDC is giving them the opportunity to network and gain exposure to potential employers. The reception of **Starflight** and volume of requests for demos, further illustrate the validity and bright futures of the **Starflight** team.

Klausmeier said, "For our senior team members, this was an opportunity to really pursue employers and have a wonderful product that showcased their abilities. For some of the younger team members, GDC was an incredible experience and an opportunity for them to make important contacts."

While GDC may be over, the excitement for the **Starflight** team has yet to subside. The team is eagerly awaiting a possible Xbox live inclusion, solidifying their game as a successful take on an old classic.



"I guess part of what I've learned during this time is how to give what needs to be done, but not go overkill."

Read more about the team, the post-mortem and play the game at www.uat.edu/starflight

Gadgets + Gizmos



← Sony Ericsson XPERIA X1

Sony Ericsson's new XPERIA brand will focus on multimedia and mobile web communication. The X1 brings a 3-inch wide VGA (800 x 480) touchscreen display, 3.2 megapixel camera (with photo light), A2DP Bluetooth, aGPS, WiFi, and microSD – just 400MB on board. On the phone side you've got quad-band GSM/EDGE, and 900/1700/1900/2100MHz UMTS/HSDPA/HSUPA (or 850/1700/1900/2100MHz). Navigation is accomplished via touch, arc-sliding QWERTY, 4-way key and optical joystick. Replace Internet Explorer Mobile browser with Opera Mobile 9.5 or Skyfire and the 110 x 53 x 16.7-mm X1 is ready to live up to its potential. Look for its release in Fall, 2008.

Projected list price: Not Determined



← Panasonic UMPC

Panasonic has created the ultimate Toughbook UMPC. Details on this new device are definitely being kept under wraps. However, we do know the water, dust and shock resistant UMPC features a 5.6-inch touch screen and a QWERTY keyboard. It runs Windows Vista and uses the new Atom CPU from Intel.

Officials say the new device will be targeted towards the professional market rather than the typical consumer. The Panasonic UMPC is scheduled for an Autumn release in 2008.

Projected list price: N/A

Wii Fit ▶



Nintendo has slated the release of the new Wii Fit for Spring 2008. Using a peripheral balance board, players perform a series of training tasks in four categories: aerobic exercise, muscle conditioning, yoga poses and balance games. The new Wii also has simulations that allow players to head soccer balls, hula hoop, ski jump, tightrope walk and do push-ups.

Projected list price: \$70.00



← Isaac Daniel GPS ID Shoes

Isaac Daniel has developed a GPS-enabled shoe that gives wearers the ability to communicate their exact location in the event of an emergency. Using a button on the side of the shoe, wearers can activate GPS tracking and send their position to a 24-hour monitoring system at which point the monitoring service will send the coordinates to local emergency services. Applications for this type of technology are vast-everything from child safety and Alzheimer care providing solutions for operations with a large group of personnel like construction sites, airports, college campuses and entertainment parks. The shoes are expected to be released in June for adults and Fall of 2008 for kids.

Projected list price: \$300.00 - \$400.00

FPS Gaming Vest ▶

Feel the impact!!! The new gaming vest from TN Games takes players to a whole new level of gaming. Players will now be able to feel every body slam, bullet and punch with this state of the art gaming vest. Leaving traditional force feedback devices in the dust, this vest uses compressed air to create precise impact simulation at the point of impact as it happens in real time. Look for its release in Summer, 2008.

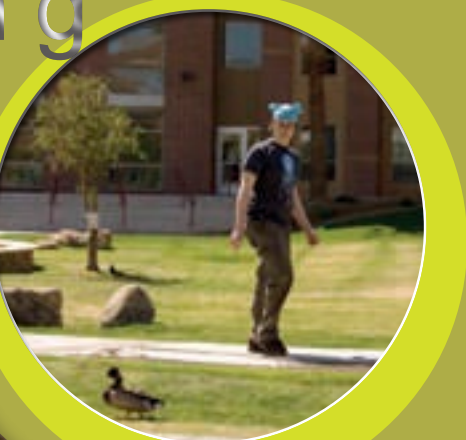
Projected list price: \$170.00



did you know...

The Phoenix Metro area is the 8th largest urban center in the country.

Humans aren't the Only Ones Attending UAT



Before the residence hall on UAT's campus was complete, the nearly two-acre grass common area between the residence hall and the university flooded after monsoons swept through valley. The resulting lake, nearly one acre in size, provided a place of respite for a family of ducks flying south for the winter. However, when the family of ducks left, one of the ducklings was left behind.

Realizing the peril of the little duckling, students and staff began to feed and take care of the youngster.

Today, this duck has become a fixture of the UAT community, walking among students as if he were one of them. He typically spends his time at the commons, resting on the very grass that was once submerged underwater as that is where students now typically spend their free time. And where there are students, there is food. So, if you see this unofficial UAT mascot around campus, say hi and drop some bread-we know he'll be thankful for it.

The recent completion of the new residence hall at UAT created a home for students and one very special bird.

Go to www.uat.edu/duckparazzi to see more photos of this duck and its secret relationship with a neighbor duck.

UAT DEGREE PROGRAMS

THE COLLEGE OF MULTIMEDIA

Earn a Bachelor or Associate of Arts in Multimedia degree in the following majors:

- > Digital Animation
- > Digital Art and Design
- > Digital Video
- > Game Art and Animation
- > Game Design

THE COLLEGE OF SOFTWARE ENGINEERING

Earn a Bachelor or Associate of Science in Software Engineering degree in the following majors:

- > Artificial Life Programming
- > Computer Forensics
- > Game Programming
- > Network Engineering
- > Network Security
- > Robotics & Embedded Systems
- > Software Engineering
- > Web Architecture

THE COLLEGE OF TECHNOLOGY MANAGEMENT

Earn a Bachelor or Associate of Science in Technology Commerce degree in the following major:

- > Technology Management

GRADUATE COLLEGE OF APPLIED TECHNOLOGY

Earn a Master of Science in Technology degree with concentration in the following areas of study:

- > Artificial Life Programming
- > Game Production
- > Information Security
- > Software Engineering
- > Technology Management
- > Technology Studies

More online at www.uat.edu/majors

FIND what's OUTnext

Free Subscription!

The Journal of Advancing Technology (JAT) is really intended for academics and industry veterans in various technology disciplines. But, if you think you're geeked enough to handle the material, we'd be happy to provide you with a free subscription. Are **you** geeked enough?

Just fill out the tear-out subscription card in this magazine or email journal@uat.edu to subscribe.

WHERE TO FIND WHAT YOU NEED

www.uat.edu
The University of Advancing Technology (UAT) is a unique, technology-infused private university that was founded by a techno-geek for techno-geeks. Our Mission is to educate students in the fields of advancing technology to become innovators of the future.

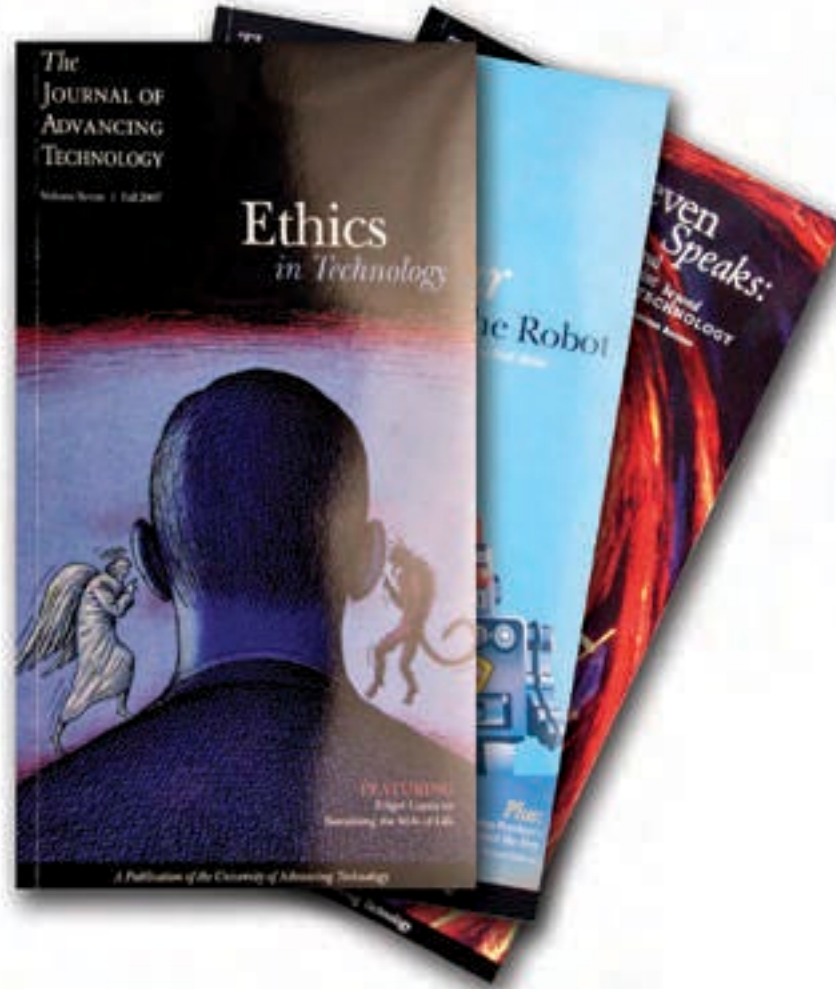
www.gamedegree.com
You love games. Live for games. Want to make your career about games. But, to break into the video game industry, you'll need a degree.

www.networksecuritydegree.com
Start Your Education in Net Security, Computer Forensics or Information Security at an NSA-recognized institution.

www.alifedegree.com
Artificial Life Programming involves breaking accepted programming paradigms in the software engineering field and moving forward with paradigms that mirror life systems. For innovative thinkers seeking a wide range of programming possibilities in a changing world.

Call your fellow Geeks out

IF YOU OR SOMEONE YOU KNOW IS NOT PLUGGED INTO THE 411 COMMUNITY OF ULTIMATE GEEKDOM, SIGN UP FOR GEEK 411 MAGAZINE AND RECEIVE A FREE UAT SHIRT. GO TO ALPHAGEEKNATION.COM



www.g33ktest.com
What kind of geek are you? Take UAT's geek test and find out where you fit in the wide world of geeks!

www.uat.edu/freshmanexperience
UAT provided six incoming freshmen with HD cameras to document their journey from high school to their first year "Freshman Experience" at UAT. See what they captured and how their lives have changed.

www.geekedatbirth.com
Learn more about where you fit in at the University. What programs are you interested in? Start your future here!

The University of Advancing Technology (UAT) is a private college for techno-geeks that merges the values of the traditional academy with the modern technology campus, a fusion that enhances our ability to fulfill the mission of educating students in the fields of advancing technology to become innovators of the future. UAT students attend a technology-infused campus located in the Valley of the Sun, a setting that promotes learning, collaboration and technology in ways that model the future of private college campuses.

UAT is an ideal environment for students who value their own uniqueness and the power of technology in education. The fusion of the traditional academy and the technology college results in a geek-friendly university with a unique, techno-centric campus culture that is both non-exclusionary and focused on Year-Round Balanced Learning, an educational methodology that ensures students achieve their academic goals in a shorter period of time than traditional colleges. UAT is at the forefront of developing academic programs that tend to be unique among academia or emerge years ahead of other schools, such as Artificial Life Programming and Robotics and Embedded Systems, as well as our established Game Development majors that merged artistic and programming aspects long before other colleges chose that focus for themselves.

UAT's academic programs deliver a general education foundation and a humanities-based approach to technology education.

BACK on UAT GROUND

BACKGROUND

UAT is a private university with a deep focus on academic excellence and technology education. The University is nationally recognized for its Year-Round Balanced Learning program and innovative technology degree programs.

ACCREDITATION

UAT is a senior college accredited by the Accrediting Council for Independent Colleges and Schools (ACICS). UAT is a candidate with the Higher Learning Commission and an affiliate of the North Central Association.

STUDENTS

The University student body is comprised of more than 1200 students coming from all 50 states and six continents.

FACULTY

The University supports 64 full- and part-time faculty members who are leaders in both industry and education.

LOCATION

Tempe, Arizona (Phoenix Metropolitan area)

2008 TUITION

Undergraduate tuition: \$8400.00 per semester
Graduate tuition: \$5100.00 per semester
For more information on UAT Tuition please visit www.uat.edu/tuition

FAST FACTS

Average Class Size: 15
Student-to-faculty ratio: 14:1
Average Incoming GPA: 3.1
Average SAT Score: 1605
Average ACT Score: 23

ALUMNI

UAT produces graduates who go on to great success with some of the country's largest companies, game studios and production houses. Companies such as Intel, Microsoft, Blur Studios, Sony Online Entertainment and Motorola have hired UAT graduates. Visit www.uat.edu/careerservices to see who has hired UAT alumni.

The University of Advancing Technology is accredited by the Accrediting Council for Independent Colleges and Schools (ACICS - 750 First Street, NE, Suite 980, Washington, DC 20002-4241, 202-336-6780) to award associate's, bachelor's and graduate degrees. The Accrediting Council for Independent Colleges and Schools is a national accrediting agency, recognized by the United States Department of Education. ACICS's accreditation of degree-granting institutions also is recognized by the Council for Higher Education Accreditation (CHEA).

The National Centers of Academic Excellence in Information Assurance Education (CAEIAE) Program is an outreach program designed and operated initially by the National Security Agency (NSA) in the spirit of Presidential Decision Directive 63, National Policy on Critical Infrastructure Protection, May 1998. Additional information regarding the National Centers of Academic Excellence in Information Assurance Education Program may be obtained by contacting the Public and Media Affairs Office at (301) 688-6524 or by email at nsapao@nsa.gov.

ASK A UAT STUDENT

Q: WHAT IS THE BEST PIECE OF ADVICE YOU HAVE EVER BEEN GIVEN?

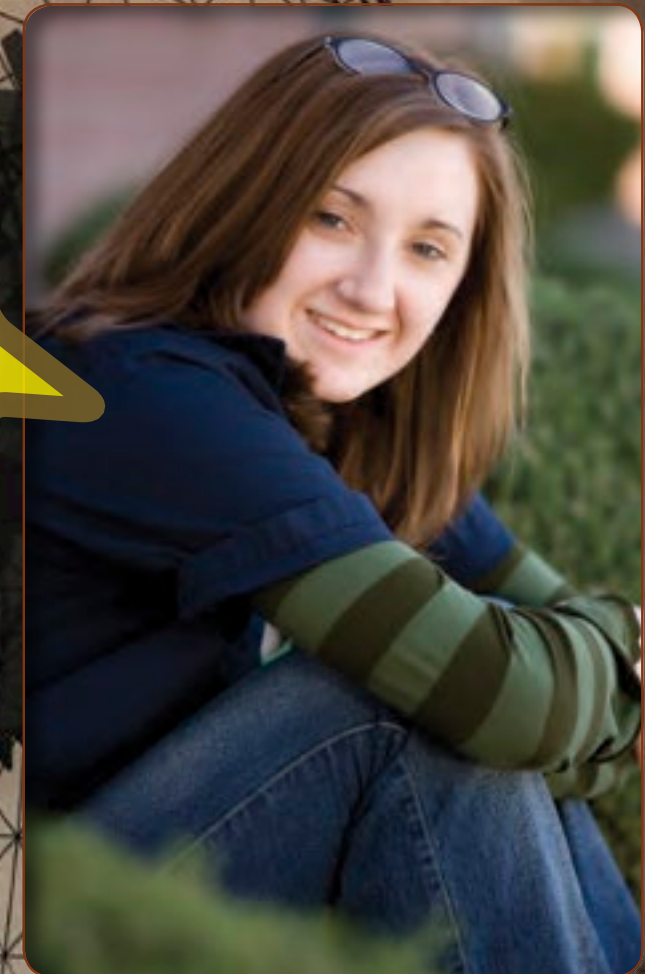
Ryan Clarke told me to never be intimidated because I'm a girl in a predominately male industry.

"I feel like I fit in here, the students aren't cliquey, everyone has similar interests."

Q: WHAT'S YOUR FAVORITE THING ABOUT UAT?

I really like our Robotics teacher, Ryan Clarke. He has a ton of knowledge on the subject and presents the information in a way that makes sense to me.

READ MORE STUDENT Q&A AT www.uat.edu/askastudent



Sara Tempest
Class: Sophomore
Major: Robotics & Embedded Systems
Home Town: Rochester Hills, Michigan

HI, ARE YOU BUSY?
HOW CAN I HELP YOU?
I NEED SOME ASSISTANCE

MEET THE STAFF

MEET THE ENTIRE UAT STAFF AT
www.uat.edu/staff

The staff at UAT is as passionate about technology as the students and faculty. And they are just as passionate about their mission to assist students in every facet of their college experience. We are unique because we have created, and continually nurture, a community of students and staff — self-styled geeks, many of them—whose personal and professional lives revolve around technology.



KEZIAH GARRETT

Student Services Coordinator, Student Services

Keziah began her commitment to UAT in 1997 as a freshman in the Multimedia program. After graduating in 2000, she spent nine months in Spain only to find herself back at UAT as part of the staff. The unique culture and techno-centric curriculum was just too attractive to stay away from.

"I love working here. It is so fun to share a passion for technology with so many students. As a Student Services Coordinator, I get to interact with the student body and hear about their successes and the opportunities their education is providing for them. It's really neat to be a part of something so unique."



WARREN JONES

Communication Coordinator, Admissions

Warren earned his undergraduate degree at Point Loma Nazarene in San Diego, California. He became an Admissions Coordinator at UAT because he likes to interact with students and loves technology (it says "Technology Guru" on his business card).

"I love any gadget, video game or electronic, really anything that requires a power source-I want it."

Warren tries to make every day fun. Whether he is interacting with faculty and staff or the student body, he likes to tell jokes and make people smile.

"We really are like a big family here. We joke around and have fun but at the same time we are creating an academic environment unmatched by any university I'm aware of."



MELANIE SCHOPP

Associate Dean of Residential Life and Student Programs

Melanie earned her undergraduate degree in communication and philosophy at Buena Vista University in Storm Lake, Iowa. She later went on to complete her Master's in education counseling at Northern Arizona University. Melanie started working for UAT in 2003 and has made it her mission to promote the development of the student body.

"The best part of my job is seeing students come in their first year, before they have really found themselves, and watch them blossom and develop into incredible, compassionate people. Being part of that transformation is such a huge reward."



TECHNOLOGY FORUM 2011

'cause we're always 3 years ahead of the curve!

Join technology industry experts on the campus of UAT for presentations & conversations **June 18-20, 2008**. It's a great event to get insiders' views on opportunities and breakthroughs in network security, game development, digital animation, robotic systems, software engineering and many other fields.

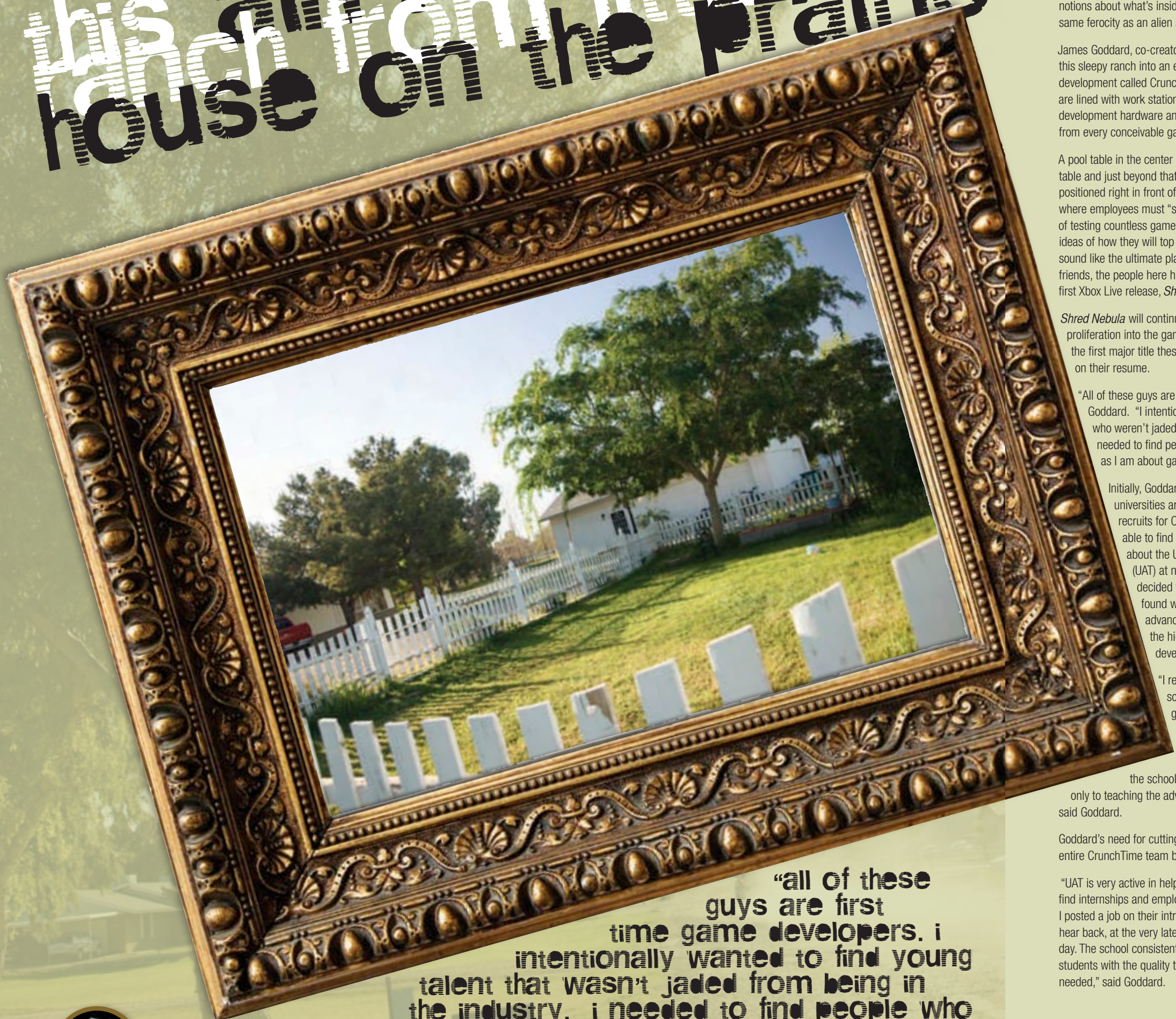
Plus, many more industry pros and surprises!

www.uat.edu/techforum

Text "TechForum" to 77812 to RSVP



This ain't the little ranch house on the prairie



"all of these guys are first time game developers. i intentionally wanted to find young talent that wasn't jaded from being in the industry. i needed to find people who were just as passionate as i am about game development." - james goddard, ceo of crunchtime games

The bright blue southwestern sky provides the perfect canvas for a quiet picturesque ranch just Southeast of the bustling Phoenix metro area. White picket fences surround acres of lush green fields and mature Brazilian Pepper trees. To the untrained eye, one might assume this ranch provides its owners with a more simple way of life.

However, once you step into the 1200-square-foot barn—a beacon of game creating technology—any preconceived notions about what's inside are instantly eliminated with the same ferocity as an alien ship caught in a proton crossfire.

James Goddard, co-creator of *Street Fighter II*, has turned this sleepy ranch into an epicenter of creation and game development called CrunchTime Games. Inside, the walls are lined with work stations boasting the latest in game development hardware and software—not to mention posters from every conceivable game known to man.

A pool table in the center of the room acts as the conference table and just beyond that is a bank of theater chairs positioned right in front of an 100-inch projector screen where employees must "suffer" through the arduous task of testing countless games, including *Guitar Hero*, getting ideas of how they will top the latest releases. While this may sound like the ultimate place to kick back and relax with friends, the people here have been working diligently on their first Xbox Live release, *Shred Nebula*.

Shred Nebula will continue the march of CrunchTime's proliferation into the gaming industry. It will also become the first major title these young game developers will put on their resume.

"All of these guys are first-time game developers," said Goddard. "I intentionally wanted to find young talent who weren't jaded from being in the industry. I needed to find people who were just as passionate as I am about game development."

Initially, Goddard looked at various software universities around the country for possible recruits for CrunchTime. However, he wasn't able to find the talent he needed. He heard about the University of Advancing Technology (UAT) at numerous industry functions and decided to go to the campus. What he found was a school devoted solely to advancing technology with degrees in the highly specialized areas of game development.

"I really liked the fact the school was so serious about technology and the game development students there were just as passionate as I am about gaming. And coming from the corporate world, I liked that the school was a private university dedicated only to teaching the advancing part of technology," said Goddard.

Goddard's need for cutting edge programming resulted in his entire CrunchTime team being from UAT.

"UAT is very active in helping students find internships and employment so, if I posted a job on their intranet, I would hear back, at the very latest, the next day. The school consistently produced students with the quality talent we needed," said Goddard.

[www.shrednebula.com]



"i really liked the fact the school was so serious about technology and the game development students there were just as passionate as i was about gaming."

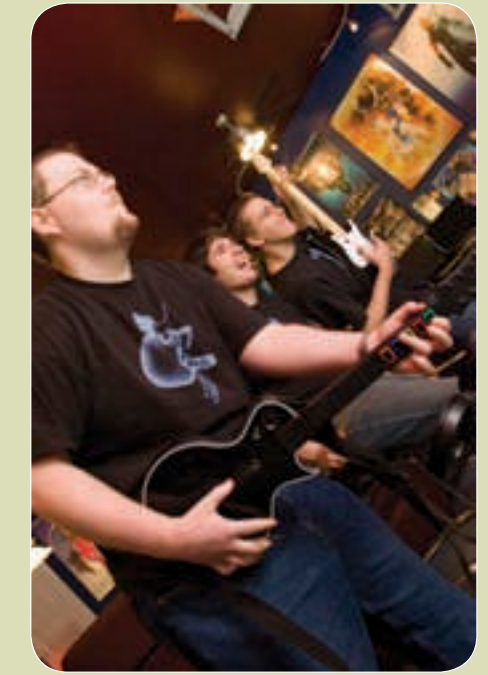
Knowing how hard it is to break into the gaming world, Goddard also wanted to give back by providing young game developers a chance to realize their dreams and work on something big.

"I want to show these guys that there is an alternative to traditional corporate game development. I'm huge on eliminating the typical constraints that go along with the corporate environment. Part of that involves taking a chance on young talent and giving them the room they need to create," said Goddard. "However," he continued, "we are totally performance based—if you have the skills you get the work. We don't deal with petty issues like seniority. We all have the common goal to produce the very best and if someone new can do it better, the team supports them."

Goddard's style and his willingness to develop young talent makes him an anomaly in the gaming industry—at least among those producing major titles. He and the CrunchTime team have taken a refreshing approach to game design by attempting to strip away all that hinders creativity and focusing squarely on innovation.

"I think part of the reason we are so successful at CrunchTime is because the students recruited from UAT have been learning in a non-traditional environment that fosters growth and innovation, which is exactly what I'm looking for."

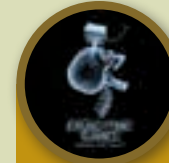
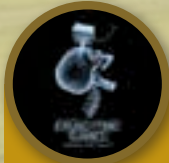
This apparent fit between UAT and CrunchTime has been reinforced as Goddard has taken a position with the UAT faculty as an adjunct professor. As a result, both UAT and CrunchTime Games will have the opportunity to access incredible talent.



To learn more about CrunchTime Games, go to www.uat.edu/crunchtimegames



James Goddard-UAT Alumni & Professor



CLUBS & GROUPS



WEB_DEVELOPMENT

The purpose of this group is to gain a better understanding of working on websites in a group environment.

JAVA_USER_GROUP

To join the Phoenix Java User's Group, all you need to do is register and attend. This group is aimed at anyone with an interest in Java technology. There are no membership dues.

PC_USER_GROUP

Phoenix PCUG is based on the idea of users helping users learn computers. The Phoenix PCUG is a member of the Association of Computer User's Group (APCUG). The Phoenix PC Users' Group meets three times a month, to reach users all across the Valley of the Sun. Come join us!

ATW

Alliance of Technology and Women (ATW) targets ALL professional women involved in technology. ATW is a dynamic new, non-profit organization founded on principles of integrity and professionalism and focused on professional development for those in technology.

COLD_FUSION_USER_GROUP

Adobe's RIA technologies enable you to rapidly build and deploy the most engaging applications across browsers and on the desktop. The Phoenix Cold Fusion Users Group is hosts special events to share exciting new information on Adobe's platform tools and technologies for building RIAs. Be part of the fun and excitement and join the rest of the Adobe developer community by participating in this group!

NET_SECURITY

DC480 is working on creating a device that will be entered in the annual DefCon conference for hackers. The DC480 group gets its name from DefCon (DC) and the local 480 telephone area code.

PAINTBALL

UAT has a competitive paintball team – Team Adrenaline! In-season games will take place January – April and then break for five months, then pick back up for October and November. Off-season takes place May – September and then back on for two months before we end the season in December due to finals and holiday events.

X_USERS

XUsers is the Mac OS X users group.

ANCIENT_GAMES

The Ancient Games Club is for games that are considered "ancient" to the student body because they are not electronic in nature. Our goal is not just to play games but to learn from them by not just exercising our mental muscles, but learning why games should be taught to children. For each game we will learn how to play it, but also strategies for winning, how to teach it, what it teaches and how to best use the game for educational benefit.

RHYTHM_GAMES

DDR (Dance Dance Revolution) is a game with a simple concept: it is based on hitting arrows that are flashing to the beat of the music. To achieve this, you must step on the appropriate arrows on the dance pad under you with accurate timing—hence it makes the illusion of dancing. Songs range from slow and easy to technical and fast—meaning there is a wide selection of difficulty. As you progress in game play the concept behind the four arrows begin to evolve into the coordination of foot movement and, if desired, dance ability. And that's all there is to it!

GSA

Gay-Straight Alliance (GSA) is a student-run club that provides a safe place for students to meet, support each other, talk about issues related to sexual orientation and work to end homophobia. Many GSAs function as support groups and provide safety and confidentiality to students who are struggling with their identity as gay, lesbian, bisexual, transgender or questioning. In addition to support, some GSAs work on educating themselves and the broader school community about sexual orientation and gender identity issues.

ANIME_CLUB

The purpose of the Anime Club is to bring together fellow students to watch and discuss anime, how it has evolved, where it is going and how the students can find a niche if they want to work in or with anime. Our goal is to promote Japanese anime.

SOFTBALL

The UAT Softball club is in full swing during the summer. Made up of students and staff, the UAT Hackers encourage men and (especially) women to join.

PHOTOGRAPHY

The UAT Photography club takes regular trips around Arizona and surrounding communities to take photographs. The club hopes to showcase a lot of its work in coffee shops and galleries around the Greater Phoenix Area. The club will be going over many technical and artistic techniques with photography.

ERROR404

Error404 is the student-based newspaper for UAT. Started in the Summer of 2006, Error404 has been steadily growing and getting better over time. We're constantly looking for people to write articles, take pictures and help bring more stories to the University. We want people who are willing to go find the stories. If you're that person, we want you! Error404 releases issues monthly and focuses stories around the University, the student community and recent industry happenings.

EXTREME SPORTS CLUB

UAT's Extreme Sports Club offers skateboarding, rock climbing (indoor and outdoor), BMX biking, surfing and snowboarding!

BIBLE CLUB

The UAT Bible Club exists to provide a forum for the study and discussion of the Bible. We have a relaxed, informal atmosphere where everyone is equal and free to be heard. All are welcome to participate regardless of beliefs.

FENCING CLUB

We just recently competed against some of the best fencers in the country. Five fencers went into the competition electrically and two non-electrically. Come join our team!

PARALLEL_UNIVERSE

We the moderators are standing by just waiting for you to post so we can be involved with everyone. The idea behind PU was to have an online place for distance learning peeps from UAT to hang out at. (not that we're saying you campus folks can't hang out either). Check us out at www.puniverse.org.

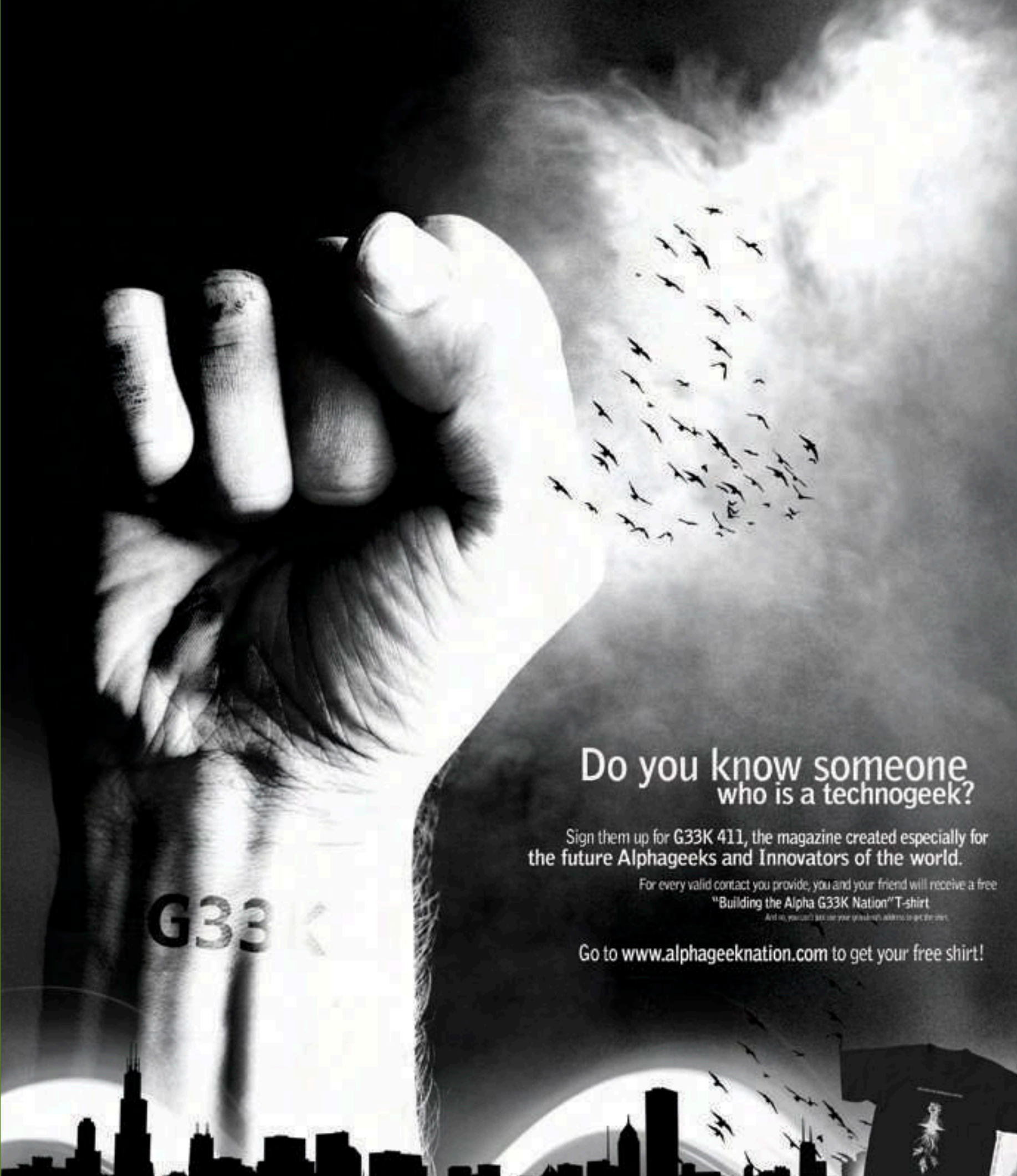
QUARTER_CIRCLE_FORWARD_CLUB (QFC)

We are the fighting games club. We do everything from SF: 3rd strike to Tekken to Melty Blood, we play it all. Discuss techniques, moves, combos, etc. Not good at fighting games? Come anyway and practice with us!

To learn more about UAT's Clubs & Groups, go to www.uat.edu/clubs

BUILDING THE ALPHA G33K NATION

JOCKS NEED NOT APPLY



Do you know someone who is a technogeek?

Sign them up for G33K 411, the magazine created especially for the future Alphageeks and Innovators of the world.

For every valid contact you provide, you and your friend will receive a free "Building the Alpha G33K Nation" T-shirt.

Go to www.alphageeknation.com to get your free shirt!



I'M A GEEK.

"I've chosen concentration rather than conformity, imagination in place of mainstream social acceptance."

Come get your geek on. UAT is a community of geeks—passionate seekers of knowledge and truth in an ever-expanding universe of technology.

www.uat.edu



Digital Animation > Digital Art and Design > Digital Video > Game Design > Game Art & Animation > Game Programming
Network Engineering > Network Security Software Engineering > Web Architecture > Robotics & Embedded Systems > Artificial Life Programming
Technology Management > Computer Forensics