

MIT's
Oldest and Largest
Newspaper



WEATHER, p. 2

FRI: 67°F | 35°F
Breezy
SAT: 44°F | 30°F
Sunny
SUN: 45°F | 32°F
Partly Cloudy

Volume 131, Number 14

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Friday, March 18, 2011



The nuclear reactors in Fukushima, Japan, were damaged by last Friday's tsunami and earthquake. The outer containment buildings of Units 1 and 3 exploded due to a buildup of hydrogen gas after the magnitude 9.0 earthquake and resulting tsunami hit. Suppression tanks at Unit 2 were damaged in an additional hydrogen explosion. The Japanese Association of MIT, the MIT Figure Skating Club, and other student groups are raising money for victims of the disaster. Aftershocks from the earthquake continue to be felt in Japan.

COURTESY OF DIGITALGLOBE

Japan in crisis, MIT reacts

Students rally behind Japanese community

By Maggie Lloyd
CONTRIBUTING EDITOR

It was supposed to be a routine visit to Japan for MISTI staff to meet with host companies and university contacts about upcoming summer internship programs. Michelle L. Kern, program coordinator for MISTI Japan, and Patricia E. Gercik, managing director of MISTI Japan, arrived in Tokyo on March 10, and started with the usual meetings the next day — the day of a 9.0 magnitude earthquake that destroyed the northeast coast.

That afternoon, the two got in a cab bound for a subway station, and at 2:46 p.m. JST, Kern says the vehicle “just started

shaking.” The driver became somewhat concerned, but after the initial quake, Gercik decided they should stay in the cab.

As it turns out, this was a good call. The subways closed, emptying waves of people onto the streets and creating massive gridlock traffic. Aftershocks continued during the rest of their ride, but the two made it back to their hotel just as traffic came to a halt.

The scene was relatively calm, recalled Gercik. “People streamed out of buildings and subways. They stood at corners and in parks, looking at the sky as if they expected the relief would come from above. The mood was quiet; not too many people talked to each other, but

some were on cell phones.”

Their dinner with MISTI alumni and other program contacts that night was cancelled since the lack of public transportation made it difficult for both attendees and restaurant staff to travel.

“There were 50 aftershocks that night and I didn’t sleep for the next two nights,” Gercik said.

The scene was much worse in northeast Japan. The initial earthquake off the coast of Honshu — Japan’s main island — created 30-foot waves in a disastrous tsunami. As many as 200,000 residents as far as 20 kilometers away from the Tokyo

Japan, Page 13

Class of 2015 admission rate sinks to 9.6 percent

On Monday, MIT celebrated pi day by granting admission to 1,715 high school seniors. Despite an increase in class size to 1,120 — up by about 60 from the current freshman class size — the class of 2015’s admission rate was a staggeringly low 9.6 percent. With 17,909 applications overall, the admissions office saw an 8 percent increase in applications from last year, driving the admit rate down from last year’s 9.7 percent.

In an e-mail, Dean of Admissions Stuart Schmill ’86 said the applicant pool this year was “quite robust.” Admissions saw a larger increase in applications from women and underrepresented minority students. Nearly half of admitted applicants — 49 percent — were women, while 8 percent were international citizens. The class of 2014, by comparison, is 45 percent women and 8.7 percent international.

An exceptionally diverse class, the class of 2015 is 10 percent African American, 30 percent Asian American, 34 percent Caucasian, 15 percent Hispanic, 1 percent Native American, plus 8 percent international. Including U.S. citizens who are living abroad, 13 percent of 2015 students don’t live in the U.S. The class of 2014 is 39 percent Caucasian, 26 percent Asian American, 13 percent Hispanic, 9 percent African American, and 1 percent Native American.

The admitted students also represent 65 countries and all 50 states. The biggest percentage of students — 21 percent — hail from the West coast, while the Mid-Atlantic region boasts a close second with 19 percent. Nineteen percent of 2015’s class is from the Mid-Atlantic area, 15 percent from the South, 13 percent from the Midwest and Plain states, and 10 percent from the Southwest and Mountain regions. Surprisingly, only 10 percent of admitted students come from MIT’s own New England region.

—Aparna Sud

Fact or fiction?

CDSA campaign tries to highlight women’s issues

By Deborah Chen
STAFF REPORTER

Have you been wondering what “Fact or Fiction” means, or what *Gossip Girl*, *Glee*, and BU have to do with women at MIT? Jessica L. Trudeau, Fact or Fiction committee head and program administrator at the MIT Community Development and Substance Abuse Center (CDSA) describes Fact or Fiction as a media campaign — created by the CDSA — to “challenge MIT undergraduate women to think about female identity at the Institute.”

“We wanted people to question the influences of female identity — stereotypes that exist on campus and stereotypes from the media — and we wanted to give women an opportunity to advocate for and engage with other women,” Trudeau said.

As part of the campaign, Fact or Fiction members created posters asking viewers, “Fact or Fiction?” — and suggesting they think about stereotypes like East Campus versus West Campus girls, and MIT versus BU and Wellesley girls. The group also set up a photo booth in the Student Center last week (March 7–10), where women could be photographed holding cards that read “I [heart symbol] a ___ girl,” with the blank representing a descriptor of a woman different from them. Postcards with results selected from an alcohol-related violence survey from April 2010 were also distributed to female students through dorm mailboxes (see sidebar).

Fact or Fiction, Page 17

Gamers invade Boston

By Jessica J. Pourian
STAFF COLUMNIST

The Penny Arcade Expo East came to Boston last weekend to a warm welcome from over 69,000 people. Fans of the Penny Arcade webcomic, tabletop games, and digital games made it to the convention to celebrate three days of gaming goodness. A number of exciting panels, concerts, game tournaments, and a stunning exhibit hall all contributed to the fun of the show. An atmosphere of gaming community was prevalent throughout the weekend; gamers showed their support for

the Child’s Play charity and were generally warm to one another.

PAX East 2011 is the biggest expo Penny Arcade creators Mike Krahulik and Jerry Holkins have ever produced. Developers from across the gaming industry attended the expo, showcasing new games and demos for fans to enjoy. As for past PAXs, people traveled from across the nation to attend the show. I spent Friday, Saturday, and Sunday at PAX East observing and partaking in the biggest gaming conference this side of the Mississippi.

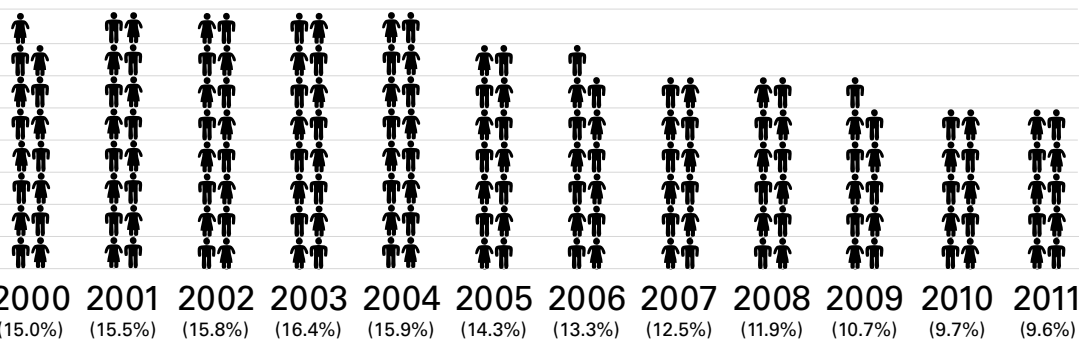
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GREG STEINBRECHER—THE TECH

Tabletop gamers filled an exhibition hall during last weekend’s Penny Arcade Expo. Games ranged from *Katamari Damacy* to Jenga.

Percent of MIT Applicants Accepted, 2000–2011



NUCLEAR CRISIS IN JAPAN?

Blow-by-blow analysis of the events at the Fukushima reactor — is it a real danger?
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JUDCOMM IS BROKEN

The IFC judiciary has serious, fundamental flaws. **OPINION, p. 5**

FICTION, OR FACT?

Campaign’s intentions may be good, but methods ... not so much. **OPINION, p. 4**



THE INTERVIEW ISSUE

Travis McCoy, Donald Glover, Nick Frost, and Simon Pegg all take time out to enlighten *Tech* readers!
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SUPER MOUSE TO THE RESCUE!

Follow the exploits of the furry denizens of the *Unnatural Selection* world.
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IN SHORT

Nominations for the Big Screw are open! Vote for the faculty or staff member who has screwed over the student body the most from April 4–8.

Last chance to vote in UA and Class Council elections today, Lobby 10, 9–4!

Edwin “Ned” Thomas steps down as chair of the Department of Materials Science and Engineering to become dean of engineering at Rice University.

Send news information and tips to news@tech.mit.edu.

Missiles fired from CIA drones kill civilians in Pakistan

By Salman Masood
and Pir Zubair Shah
THE NEW YORK TIMES

ISLAMABAD, Pakistan — Several missiles fired from U.S. drone aircraft Thursday struck a meeting of local people in northwest Pakistan who had gathered with Taliban mediators to settle a dispute over a chromite mine. The attack, a Pakistani intelligence official said, killed 26 of 32 people present, some of them Taliban fighters, but the majority elders and local people not attached to the militants.

The civilian death toll appeared to be among the worst in strikes carried out recently in Pakistan's tribal areas by the CIA, which runs the drones. Residents and media reports said as

many as 40 people had been killed in all, though the intelligence official disputed that number.

The Pakistani military chief, Gen. Ashfaq Parvez Kayani, issued an unusual and unusually strong condemnation of the attack.

"It is highly regrettable that a jirga of peaceful citizens, including elders of the area, was carelessly and callously targeted with complete disregard to human life," the statement said.

About four missiles fired from one or more drones hit the meeting, known as a jirga, of two local tribes and Taliban mediators who had gathered at a market in Datta Khel, in North Waziristan, according to two residents who live nearby in Miram Shah, the largest city in the region.

The intelligence official said that of the 32 people at the meeting, 13 were Taliban fighters, 11 of whom were killed. The rest of the dead were elders and tribesmen.

Recently discovered chromite mines are common in the area. To keep the mines running profitably, the Taliban — as the reigning authorities — often settle disputes between tribes with competing claims and levy taxes on exports and the mine operators.

After a pause in drone attacks from Jan. 23 to Feb. 20, the pace of attacks has picked up again this month. Some analysts attributed the lull to the CIA's not wanting to upset negotiations to free Raymond A. Davis, the CIA security officer who was released on Wednesday.

Global economic agency sees need for retirement age to keep rising

By Matthew Saltmarsh
THE NEW YORK TIMES

PARIS — Retirement ages in advanced economies will have to rise more than currently planned if countries hope to cover the increase in costs caused by aging populations, a global economic organization warned Thursday.

Angel Gurría, secretary general of the Organization for Economic Cooperation and Development, said more "fiscally and socially responsible" measures would be needed to avoid "a resurgence of old-age pov-

erty in the future."

In a report, the organization said that by 2050, the average age in industrialized countries for drawing pensions would reach 65 for both sexes. This represents an increase from current levels of about 1.5 years for men and 2.5 years for women.

But the trend toward later retirement and other recent changes, like promoting private pensions, will still not cover the assumed increase in liabilities as the working population shrinks and the number of retirees climbs.

The report, "Pensions at a Glance

2011," said life expectancy was rising faster than the increase in pension ages by an average of two years for men and 1.5 years for women.

The size of the working-age population in the 34 countries belonging to the organization will peak around 2015 and fall more than 10 percent by 2050, meaning that a smaller group of workers will be supporting a larger number of retirees.

Thus, financial sustainability for retirement systems "is not guaranteed unless pension ages are increased beyond current plans in most of the OECD," the report said.

FDIC sues Washington Mutual's former CEO over bank's failure

The Federal Deposit Insurance Corp. sued the former chief executive of Washington Mutual and two of his top lieutenants Thursday, accusing them of reckless lending before the 2008 collapse of what was the nation's largest savings bank.

The civil lawsuit, seeking to recover \$900 million, is the first against a major bank chief executive by the regulator and follows escalating public pressure to hold bankers accountable for actions leading up to the financial crisis.

Kerry Killinger, Washington Mutual's longtime chief executive, led the bank on a "lending spree" knowing that the housing market was in a bubble and failed to put in place the proper risk management systems and internal controls, according to a complaint filed Thursday in federal court in Seattle.

David Schneider, Washington Mutual's president of home lending, and Stephen Rotella, its chief operations officer, were also accused of negligence for their roles in developing and leading the bank's aggressive growth strategy.

"They focused on short-term gains to increase their own compensation, with reckless disregard for WaMu's long-term safety and soundness," the agency said in the 63-page complaint. "The FDIC brings this complaint to hold these highly paid senior executives, who were chiefly responsible for WaMu's higher-risk home lending program, accountable for the resulting losses."

—Eric Dash, *The New York Times*

Tibetan monk dies protesting Chinese rule by self-immolation

BEIJING — A young Tibetan monk who set himself on fire to protest Chinese rule in the vast Tibetan regions of western China died early on Thursday. It was the first time that a monk protesting against China had killed himself through self-immolation, according to historians of modern Tibet.

The act appeared to reflect the sense of desperation and futility that simmers among Tibetans who chafe at rule by China, which invaded central Tibet in 1951. The monk, Phuntsog, 20, belonged to the Kirti Monastery in Sichuan Province. The monastery has been a center of protest against Chinese policies and was especially active in the 2008 Tibetan uprising.

"China's violent rule in Tibet has escalated since 2008 to a point where Tibetans feel compelled to take desperate action," Tenzin Dorjee, executive director of Students for a Free Tibet, based in New York, said in a statement. "Phuntsog Jarutsang's self-immolation is a window into the deep suffering and frustrations that Tibetans everywhere are feeling, and is an urgent cry for help that the global community cannot ignore."

Phuntsog set himself on fire at 4 p.m. Wednesday, according to a report Thursday by Xinhua, the official Chinese news agency.

—Edward Wong, *The New York Times*

REALITY SUCKS



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Your Discount	\$ 4,231.03



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'Fact or Fiction' — an appropriate title

Campaign has good intentions but misleading methods

By Michael Veldman

STAFF COLUMNIST

My first reaction upon visiting the Fact or Fiction website was decidedly negative. But after exploring the site more, talking to girls about the campaign, and seeing some of the posters, I can see why — at least — its heart is in the right place.

The Fact or Fiction campaign was founded by a group of undergraduate women at MIT to combat the ostensible "Mean Girls" atmosphere that pervades non-sexual female-female relations at our school. The group's modus operandi ap-

good. It seems to say, "See? East Campus girls aren't that weird after all!" The value judgment inherent in the depiction leaves girls who actually do wear fishnets (they exist!) and other non-conservative attire out of the range of what is "acceptable" and declares West Campus girls to be the norm to which all others should rightly conform.

If the goal of the campaign is to foster a greater sense of female camaraderie on campus, convincing Baker girls that their sisters at Senior Haus are "just like them" is not going to do much. In general, they aren't just like each other; the whole idea

ting back at men." Let us dispel with this insidious myth right away. According to a 2010 study by psychologist David Lisak at UMass-Boston, generally less than six percent of rape accusations are false. This is certainly unacceptable — no one should be falsely accused of such a detestable crime — but most people stop there and do not consider the far larger number of actual rapes that are never reported (at least 60 percent, but perhaps as high as 96 percent), never prosecuted (almost 50 percent of those reported), do not result in a conviction (about 42 percent of those prosecuted), and do not result in jail time (about 31 percent of those convicted). I cannot tell if it is worse to be falsely accused and convicted of rape or to be raped without getting justice, but I can tell you which happens a heck of a lot more. If you find yourself championing the cause of the accused over that of the complainants, do re-evaluate your priorities.

Similarly, one in six women at MIT believe that "when women are raped, it's often because the way they said 'no' was ambiguous." Once again, the data beg to differ. In a 2002 study by Lisak involving 1,882 male college students, 120 of these students (around 6 percent) admitted to actions that constitute rape or attempted rape, and 76 of those 120 (around two-thirds) were repeat rapists averaging 5.8 instances each. Virtually all of them were cognizant of the fact that using alcohol or other substances, the threat of coercion or physical force, or actual coercion or physical force were methods of initiating sex against the wishes of their victim. This suggests there is a subset of perpetrators who rape almost according to procedure.

What I mean to say by all of this is that while it's wonderful that the Fact or Fiction campaign is raising awareness of women's issues, will putting these survey results in hundreds of mailboxes without

To attempt to apply some uniform 'MIT female' profile to every undergraduate girl on campus defeats the purpose of one of the campaign's main goals: to do away with generalizations.

pears to be the distribution of postcards to the mailboxes of MIT undergrad women and the strategic placement — i.e., in girls' bathrooms — of informative posters in an attempt to challenge their deeply ingrained stereotypes of other women.

If you have visited the website, the first thing that might strike you is the mission statement, which is nothing less than to "defin[e] MIT female identity."

A lofty goal, indeed — not to mention completely unwarranted and unsolicited. The thing is, no one is allowed to define another person or group's identity. You are only allowed to define yourself. To attempt to apply some uniform "MIT female" profile to every undergraduate girl on campus defeats the purpose of one of the campaign's main goals: to do away with generalizations.

What's more, the campaign doesn't even paint an accurate picture of MIT women. If you take a look at one of their posters (the one that attempts to combat stereotypes of women at area colleges, including MIT), you might not be surprised to find a striking dearth of women of color. Another poster that ostensibly attempts to counter the notion that East Campus girls are more punk, alternative, or ostentatious with their dress shows a spectrum of Barbies in a series of outfits, ranging from the professional to the scandalous. Two girls, one from Simmons and one from EC, are placed along the spectrum where stereotype would dictate — the Simmons girl near the professional Barbie and the EC girl next to the Barbie in fishnets — but, lo and behold, they are both dressed conservatively.

The poster ends up doing nothing less than misrepresenting the range of expression that MIT girls represent. To suggest that East Campus is no different than West Campus is both disingenuous and pointless. Of course, there is variation within each group and it's unfair to generalize all students at a particular dorm, but the poster ends up doing more harm than

of dorm culture would be rendered void if that were true. More importantly, this isn't a problem that needs to be fixed. Someone tell me the last time two girls "shoved or pushed" each other or "hit or slapped someone" (as the Fact or Fiction website says 12.7 percent and 9.1 percent of MIT girls have done, respectively) because of their "dorm-centered animosity." MacGregor girls aren't the Hatfields to Bexley's McCoys. There is no substantial courtesy deficit between girls of different dorms.

Misguided attempts at bridge-building aside, the website does post some very telling — and frankly frightening — statistics from the polling of 2,400 MIT students this past April. According to the site, "28.9 percent [of MIT women, refreshingly less than the same proportion of American women in general] agreed with the statement: "If a woman is raped while she is drunk, she is at least somewhat respon-

While it's wonderful that the Fact or Fiction campaign is raising awareness of women's issues, will putting these survey results in hundreds of mailboxes without the proper refutation do much to change attitudes?

sible for letting things get out of control." Let me begin by stating the obvious, but that which is rarely reinforced: the rapist, and only the rapist, is responsible. It is absurd to suggest that women must accept with resignation an increased risk of sexual assault as a consequence of drinking. How preposterous — indeed revolting — is it that as a culture we attribute responsibility to intoxicated women for being raped, but we do not similarly condemn an intoxicated person who is the victim of battery or robbery?

Additionally, 27.9 percent of MIT undergrad women agreed that "rape accusations are often used as a way of get-

the proper refutation do much to change attitudes? And why the need to confine the target demographic to just under half the MIT undergraduate population? Considering the vast majority of rapes are committed by men, it would seem to be more expedient and necessary to raise their awareness. Cultivating an atmosphere of sisterhood is definitely a worthy goal, and one that can and should be confined solely to women, but when it comes to advocating for better attitudes toward rape victims and a more rational view of rape, a campaign that ignores the portion of the population with the most power to stop it is nothing if not impotent.

CORRECTIONS

An article published on Tuesday about the UA debate omitted Alexander W. Dehnert from a list of UA officials who have recently resigned. In February, Dehnert resigned as Living Group Council Senator and UA Chief of Information Technology.

OPINION POLICY

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The back of the envelope

Continuing analysis of the Fukushima crisis

By Keith Yost
STAFF COLUMNIST

In the last issue of *The Tech*, I tried to explain the events at the Fukushima Nuclear Power Plant and gave my opinion, as someone with two nuclear engineering degrees from MIT, as to what I thought the situation on the ground was and the likely course of events. In particular, I made three important claims:

1) Looking back, we will reflect on the events at Fukushima Daiichi as a success, not a failure, of nuclear safety engineering.

2) The risk to the public from radiological releases from Fukushima Daiichi has been and will be effectively zero.

3) It is likely that the none of the fuel at Fukushima Daiichi has been or will become melted.

As an opinion columnist with some 80 or

so articles to my name, I've had to eat crow before. I don't like the taste, but I'd rather dine on my words than live the rest of my life making only those predictions that are too vague or distant to ever come back to haunt the predictor. Whether it was speculation on the legislative chances of ObamaCare, the weapons program of Iran, or the suitability of Sarah Palin as a vice presidential candidate, I've managed to make a fool of myself in this paper even when I had days to prepare my thoughts. In trying to assess Fukushima Daiichi, a technically complex, ongoing event with limited information, I had mere hours to analyze the problem, and my article did not appear until two days after it was written — an eternity where crises are concerned.

I still stand by two out of three of my claims. A 40-year-old nuclear power plant was just subjected to the fifth largest recorded earthquake in history. It had not been

designed to remain operational in the aftermath of that event, only to fail in a manner that protected the public from harm. It is doing just that, and in my book, that counts as a powerful demonstration of reliability.

The public faces virtually zero risk from radioactivity. The most exposed individual so far has been a worker who received a measured 10.63 mrem of dose — this is against a background yearly dose of roughly 350 mrem for the average individual. And the public is at significantly less risk than those working on-site.

Unfortunately, the third claim, that the uranium at Fukushima 1, 2, and 3 is and will remain unmelted, has not stood up as well. As I look over the reports from Units 1 and 3, I still see windows of time in which clad melting might be possible, though not many where fuel melting is a concern. However, new events at Unit 2 (which occurred after

I had written my article) do appear to have resulted in partial fuel melting.

There is plenty of non-technical opinion to be written on nuclear power in the aftermath of the earthquake — predictions on the future of the nuclear renaissance, commentary on the performance of the government and the media, philosophical discussions about risk and societal trade-offs, etc. But there will always be time for those topics. Right now, the best use of my column inches is to share what I have scribbled on the back of my envelope so that fellow engineers can critique my mental model of events, build their own calculations of what is happening at Fukushima, and better explain to their friends and family what is going on. With that goal in mind, here is my current understanding of the thermodynamics of the Fukushima reactors, and my own timeline of events.

Unit 1 — Thermal Characteristics

Unit 1's reactor vessel is approximately a cylinder with a height of 19.7 m and a radius of 2.4 m, giving it a volume of 356 cubic meters, with the top of the fuel rods positioned at roughly 4 m above the bottom of the vessel. At the time of shutdown, the reactor contained 68,000 kg of UO_2 fuel, and its primary coolant system contained 148,000 kg of H_2O . At the time of shutdown, the maximum clad temperature in the reactor was 310°C, the peak (centerline) fuel temperature was 1690°C, and the average coolant temperature was 234°C. Operating core power output was 1380 MW_{th}. At full capacity, the coolant pumps can move 21,800,000 kg of coolant through the primary loop.

UNIT 1

Friday, March 11

~19:15 — A pump or valve failure at Unit 1 ceases or reduces coolant flow at Unit 1. Power output at Unit 1 is currently at ~7 MW.
21:34 — TEPCO reports falling coolant levels at Unit 1 and begins work to restore power to Unit 1's emergency core coolant pumps, either because of a mechanical failure of normal pumps or a pressure situation within the core that prevents low-pressure coolant injection.

Saturday, March 12

~01:15 — TEPCO restores full or partial coolant flow in Unit 1. By the time cooling is re-established, the fuel rods have been uncovered and the fuel clad is damaged due to overheating.
~03:00 — Conditions in Unit 1 compel TEPCO to consider venting steam to relieve pressure. They notify the government and evacuation occurs.
10:07 — TEPCO begins venting steam from Unit 1.
15:40 — Hydrogen generated from damage to the fuel cladding explodes, destroying the outer containment building of Unit 1. The inner containment building and reactor vessel are undamaged.
20:43 — TEPCO begins injecting seawater into the reactor vessel of Unit 1.

Sunday, March 13

11:55 — TEPCO begins injecting seawater into the Unit 1 containment building.

Monday, March 14

01:10 — Injection of seawater into the reactor vessel of Unit 1 ceases, due to lack of seawater in the source pit.
03:20 — Injection of seawater resumes. Degree of core damage remains unchanged.

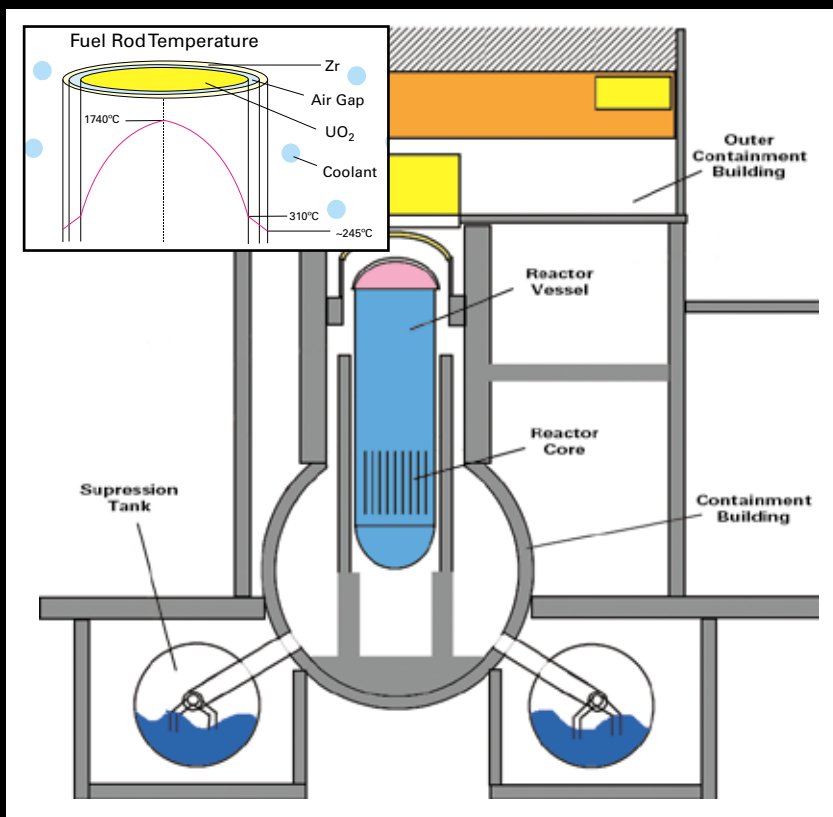
INITIATING EVENTS

Friday, March 11

14:46 — A 9.0 earthquake occurs off the northeast coast of Japan. Shortly afterward, Units 1, 2, and 3 of the Fukushima Daiichi power plant trip, control rods are fully inserted, and the reactors enter hot shutdown. Off-site power is lost. Backup generators successfully start at Units 1, 2, and 3 and core cooling begins. Core power output falls to at 91 MW in Unit 1, and 155 in Units 2 and 3.

The earthquake causes a very small LOCA (loss-of-coolant-accident) in the primary loops of Units 1, 2, and 3 due to broken pump seals (on the order of 125 to 175 kg/hr).

15:41 — Tsunami strikes the Fukushima Daiichi plant, disabling all backup power generators. Battery power kicks in for Units 1, 2, and 3. At moment of impact, core power output in Unit 1 is 21 MW, and output in Units 2 and 3 is 36 MW.



UNIT 4

Tuesday, March 15

09:38 — Oil from a water pump at Unit 4 ignites.
~11:00 — The oil fire is extinguished.
~18:00 — The spent fuel pool at Unit 4 begins boiling.
20:54 — The water level of Unit 4's

spent fuel pool is deemed low enough to represent a health risk to workers. Workers are re-located away from the vicinity of the pool.
21:11 — TEPCO begins work to pump coolant into Unit 4's spent fuel pool.

UNIT 3

Saturday, March 12

~02:45 — Battery power in Unit 3 fails. Coolant flow stops.
~04:45 — Mobile generators are hooked up and coolant flow resumes. No core damage occurs.

Sunday, March 13

~09:00 — TEPCO observes unusual conditions in Unit 3, particularly its emergency core coolant system. They are unsure whether it is a problem with the system or the instrumentation.

~12:00 — TEPCO begins injection of seawater into the Unit 3 core as a precaution.

Monday, March 14

01:10 — Seawater injection into the reactor vessel of Unit 3 is interrupted due to lack of seawater in the source pit.
03:20 — Seawater injection into the reactor vessel of Unit 3 resumes. No core damage occurs.
11:01 — A hydrogen explosion destroys the outer containment building of Unit 3.

Units 2 and 3 — Thermal Characteristics

The reactor vessels of units two and three are approximate cylinders with heights of 21.9 m and radii of 2.75 m, giving them each a volume of 356 cubic meters, with the top of the fuel rods positioned a roughly 4 m above the bottom of the vessel. At the time of shutdown, each reactor contained 94,000 kg of UO_2 fuel, and their primary coolant systems contained 207,000 kg of H_2O . At the time of shutdown, the maximum clad temperature in the reactor was 310°C, the peak (centerline) fuel temperature was 1740°C, and the average coolant temperature was 242°C. Operating core power output was 2380 MW_{th}. At full capacity, the coolant pumps can move 33,300,000 kg of coolant through the primary loop.

UNIT 2

Saturday, March 12

~04:45 — Battery power is replaced with power from mobile generators, and cooling continues.

Monday, March 14

~07:00 — A safety relief valve is stuck in the closed position. Operators are unaware of the problem, and pressure builds.

~13:10 — High pressure (7 MPa) in Unit 2 ceases flow of coolant water. The water level in Unit 2 is reported to be decreasing.

19:20 — As the water level reaches the top of the fuel rods, TEPCO attempts injection of seawater into the Unit 2 reactor and fails due to pressure. The rods become uncovered.

~19:55 — TEPCO discovers the stuck safety valve and opens it, relieving pressure.

20:10 — TEPCO begins seawater injection into the reactor vessel of Unit 2.

20:50 — TEPCO reports that it presumes damage to fuel elements in Unit 2 based on radiation readings.

22:14 — TEPCO estimates fuel damage in Unit 2 as less than 5 percent.

Tuesday, March 15

06:10 — A hydrogen explosion at Unit 2 damages the Unit's suppression tanks. The containment building remains intact, but there is partial damage to Unit 2's reactor vessel, initiating a small LOCA (loss-of-coolant). Cooling is sufficient to compensate for the LOCA.

Community star tells us what drives him

Donald Glover, from Page 7

as a actor, writer, comic, and rapper. How do you see those roles relating to each other?

DG: The more I am myself in all of the things I do the more, I think, people respond because it's not bullshit. I think the fact that I'm rapping about stuff I know, the more people are like, "This isn't bullshit." I think Tina Fey does the same thing. Like all of her movies and stuff that she's done with SNL, that's her. There are through lines for people to follow. So I try to do that. It's been a lot of checking in with myself about what I'm trying to do.

Do you lean towards any one role more than another, or do like to be working on everything all at once?

DG: I kind of see them all as the same thing. People are always asking how do you separate them and how do you prioritize? And I sort of see them all as the same thing, which is kind of why I like stand-up the most because you can do all of that. On stand-up you can tell a joke and you can rap and you can do music. I never really

see them as "OK, time to put on my rapper hat." I really do just feel that they're all the same. They're not just me putting on costumes, they're me just stepping out. A lot of jokes and stand-up end up on records that I do.

Having been both a writer for 30 Rock and an actor on Community, how do you think one role has informed the other? Do you find it easier to understand the writing process or acting process as a result?

DG: Yeah, absolutely. In the writers' room at 30 Rock we would write a joke and it was really perfectly worded and you expected it to be said that way and then somebody would trip up on it, not their fault, but they would trip up on it and then we'd just have to rewrite the joke because it didn't work at the table read. So at the table read I'm always very cautious, because I know if I mess up in the show [Community], that's like three hours of work [rewriting.] So I try and do it the right way for everybody to make it as easy as possible.

Your character on Community is not the typical jock football star. He's kind of dorky

and quirky. From the perspective of both a writer and an actor, what do you think makes these quirky or nerdy characters so popular in television and movies right now?

DG: I don't think any of us really see ourselves as cool and popular. Very few of us see ourselves as cool and popular. I think if you have a scale of one to ten — like how were you in high school — if really cool or popular is a ten, everyone you talk to would put down a five. No one thinks they're really cool or really nerdy, everybody's in the middle. But it's definitely in high school you kind of feel nerdy or alone, at least I did. I think now it's just that people don't want to watch what [they] wanna be, as much as [they] wanna watch what [they are.] And I tried really hard at the beginning [of Community] to study football characters, but then it kind of just turned into me. I think you can see that as I start crying more in the episodes. People call it nerdy, but I really think it's just the way people are. Everybody does weird things, they just don't show them to everybody. So I think it's just something that's happening because people are

more willing to look at themselves.

And do you think that it's also important to bring that quirkiness and vulnerability to your stand-up?

DG: Yeah, I feel like when people do fake quirky ... you notice it. With everything that I do, I try to be really truthful. I'm sure that my publicists who are writing my Twitter account probably would not allow me to say or do some of the stuff I say. But I feel like that's what people enjoy the most because I'm not lying. That persona is out there. Like when that whole Spiderman thing came out [an online fan movement to have Glover play Spiderman in the new movie]. One thing that I thought was kind of ridiculous is that they were like, "Well, there's no quirky black dudes." Well, that's not true. My dad's a quirky black dude. He totally made me watch Star Wars in movie theaters. Everybody's like that, that's not just a thing. So I feel like in everything and in the stand-up I try to do truthfulness.

Be sure to head over to the blogs at techblogs.mit.edu for some bonus questions with Donald that didn't make it to print!

INTERVIEW

American culture and six-headed babies

Nick Frost and Simon Pegg talk about their roles in *Paul*

By Jeff Z. Chen
STAFF WRITER

Last Tuesday, I had the chance to sit at a round table interview with Nick Frost and Simon Pegg, the comedy duo starring in and directing the upcoming alien comedy film *Paul*. The duo is perhaps best known for their two previous works, *Hot Fuzz* and *Shaun of the Dead*, part of their *Blood and Ice Cream* trilogy. We spoke to Nick and Simon about a range of topics, from what it was like to work with the actors in *Paul*, to American culture, to 6 headed babies.

Does it ever get to the point where the American accent drives you up the wall?

Simon Pegg: I love it, actually. If you look at all our references of stuff we allude to, it's all exclusively American stuff. As Englishmen we grow up on a diet of American culture. You've got this amazing resource; a country that's 100 times as big as ours and speaks our language, so I'm used to it.

Nick Frost: It does get a bit tiring if you watch Food Network. Especially when the commercials come on, and the cynical marketing people pop up and use 1000 words to describe a red pepper.

You went on a road trip of the western United States to prepare for *Paul*; what was the most surprising thing you found?

SP: We found a 6 headed baby, that was really...

NF: Yeah, that was weird.

SP: I think we were most shocked by the sheer size and scope of the nation physically. We live in nation that you can literally travel across in a day. In this country, you can travel a whole day and not see a single human being, and that was awe inspiring. When you see what's in between this ex-

traordinary landscape, it's vast and terrifying, and you get a sense of what's behind the American psyche, the pioneer attitude and forward momentum that this country has; it's in the very rocks. And everyone we met were incredibly welcoming and warm, apart from the mother of the six headed baby who drove us off with a pitchfork. The idea of writing the film without this trip was an absurdity.

Who selected Seth Rogen to be the voice of *Paul*, and did it change the writing at all?

NF: We originally wanted a deep gruff voice, like Rip Torn, but you realize you've gotta get this film made, and you go to Universal with Rip Torn, and they say no. So we had to compromise; they wanted someone who was comedically relevant, we wanted someone with a deep gravelly voice. Seth was the only person who fit both ends.

Was it difficult to get Steven Spielberg to do a cameo?

SP: It was his idea! We were gonna do this concept that *Paul* was going to be a cultural influence on a lot of science fiction, especially giving Spielberg a lot of his movie ideas, and when we told him this, Spielberg's eyes lit up, and he said, "Maybe I should be in it" and we were like, really?

Do you ever have a concern about meeting a personal idol of yours, and finding out that they aren't what you hoped they would be?

SP: Someone had a very interesting point, which was that perhaps *Paul* is a metaphor for meeting our idols, because it's like something fabulous steps out from the dark and turns out to be quite ordinary. And in a delightful way, every time we've met our heroes, they've been down to earth. Spielberg, Tarantino ... everyone who we've really wanted to meet has not disappointed us in the fact that they have not been a dick.

NF: I think you have to take into account that everyone is in some way, flawed, and if you go in with that in mind you're never really going to be disappointed.

Were all of the Kristin Wiig parts scripted or ad libbed?

SP: Very much ad libbed. We had many conversations of whether "titburgers" was funnier than "dickmilk."

NF: If someone had taken a picture of me and Simon and Greg [Mottola] and Kristin staring in front of the television, you'd say "Oh, these are filmmakers," when in fact we were talking about what was funnier, titmilk or dickburgers.

Nick, your character Clive in *Paul*, in comparison to the bumbling sidekick in *Hot Fuzz* and *Shaun of the Dead*, is a much more serious, emotionally affected character. Whom do you personally identify with more, or are both really far off from your true self?

NF: I think I'm going to sound like an idiot when I say this, but you need to bring a bit of yourself into everything you do, or

otherwise people will see through it as not very realistic. The closest thing to me was probably when I did a BBC adaptation of a Martin Amis novel called *Money*, and I'm probably nearest to that man.

SP: He's basically an insane, womanizing drunk.

NF: Doing a lot of comedy and being seen as a bumbling sidekick, it was great for me to be able to play what was essentially a lunatic, a man falling ill before your eyes. Non-comedy is a struggle, you've gotta look inside yourself and really pull from that.

Last question ... *Star Wars* or *Star Trek*?

SP: You know I can't answer that. *Paul* comes out in theaters today.



CHRISTIAN J. TERNUS—THE TECH

Allison M. Schneider '13 (Mercutio) and Katherine A. Roe '14 (Tybalt) share an intimate moment in the MIT Shakespeare Ensemble's production of *Romeo and Juliet*.



CHRISTIAN J. TERNUS—THE TECH

Grace M. Kane '11 (Romeo) and Allison M. Schneider '13 (Mercutio) star in the MIT Shakespeare Ensemble's production of *Romeo and Juliet*.

Paul

Directed by Greg Mottola

Starring Simon Pegg, Nick Frost, Seth Rogen

Rated R, now playing



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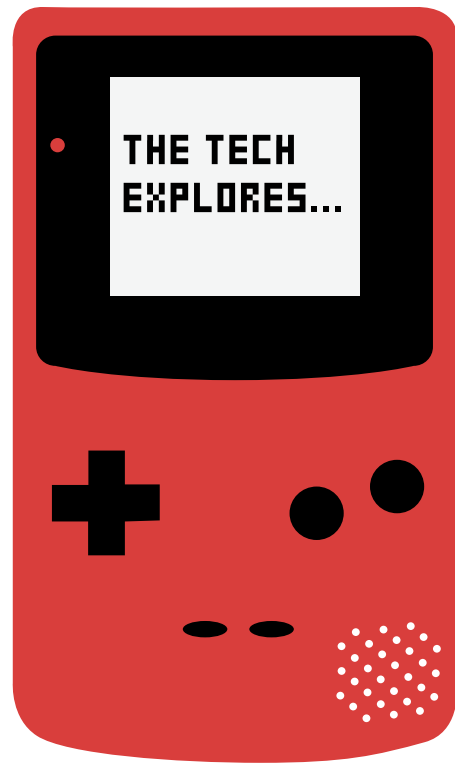
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UA Finance Board Spring II allocation results

Note: Spring 2011 marks the first time FinBoard has allocated funds in two spring cycles. This year, funding from Spring I allocations rolls over to Spring II; some groups did not submit Spring II budgets.

Group	Req. Operations	Allocated Operations	Req. Capital	Allocated Capital	Req. Events	Allocated Events	Req. Publicity	Allocated Publicity	Total Re-quested	Total Allocated	% Alloc.
African Students Association	—	—	—	—	\$1,536	\$1,436	\$90	\$90	\$1,626	\$1,526	94%
AIRMUN	—	—	—	—	\$250	\$250	—	—	\$250	\$250	100%
Alpha Phi Alpha Fraternity Inc.	—	—	\$50	—	—	—	\$50	\$50	\$100	—	0%
Alternative Spring Break	—	—	\$120	—	\$360	\$360	\$70	\$70	\$550	\$430	78%
Amnesty International	\$510	\$510	—	—	\$300	\$300	\$160	\$160	\$970	\$970	100%
Anime	\$70	\$70	\$2,920	\$20	\$655	\$655	\$60	\$60	\$3,705	\$805	22%
Asian American Association	\$68	\$68	—	—	\$630	\$630	\$100	\$100	\$798	\$798	100%
Asian Baptist Student Koinonia	\$210	\$210	—	—	\$230	\$230	\$400	\$400	\$840	\$840	100%
Asian Christian Fellowship	\$25	\$25	\$90	\$90	\$725	\$725	\$125	\$125	\$965	\$965	100%
Asian Dance Team	\$100	—	—	—	\$2,940	—	\$80	\$80	\$3,120	—	0%
Assassins' Guild	—	—	\$80	\$80	\$375	\$375	—	—	\$455	\$455	100%
Association of Taiwanese Students	—	—	\$100	\$100	\$1,520	\$1,520	\$180	\$180	\$1,800	\$1,800	100%
Atheists, Agnostics, and Humanists	—	—	—	—	\$211	\$211	\$5	\$5	\$216	\$216	100%
Baptist Student Fellowship	—	—	—	—	\$400	—	\$40	\$40	\$440	—	0%
Best Buddies	—	—	—	—	\$170	\$170	—	—	\$170	\$170	100%
Bhakti Yoga	\$1,540	\$500	—	—	—	—	\$120	\$120	\$1,660	\$560	34%
Bhangra	\$1,700	—	—	—	—	—	—	—	\$1,700	—	0%
Brain Trust	\$55	\$55	—	—	\$868	\$868	\$107	\$107	\$1,030	\$1,030	100%
Campus Crusade for Christ	—	—	\$200	—	\$1,275	\$1,275	\$75	\$75	\$1,550	\$1,350	87%
Caribbean Club	\$10	—	—	—	\$730	\$230	—	—	\$740	\$230	31%
Casino Rueda Group	\$150	\$150	\$260	—	—	—	\$50	\$50	\$460	\$200	43%
Caving Club	\$317	\$317	\$370	\$370	\$150	\$150	—	—	\$837	\$837	100%
China Care	\$192	\$192	\$80	\$80	\$439	\$339	\$50	\$50	\$761	\$661	87%
China Development Initiative	—	—	—	—	\$1,420	\$1,420	\$200	\$200	\$1,620	\$1,620	100%
Chinese Ensemble	—	—	—	—	\$180	—	\$40	\$40	\$220	—	0%
Cross Products	\$435	\$435	\$22	\$22	\$30	\$30	\$437	\$437	\$924	\$924	100%
Dance Troupe	—	—	\$1,000	—	\$2,370	—	\$505	\$505	\$3,875	—	0%
Debate Team	\$1,200	\$1,200	—	—	—	—	—	—	\$1,200	\$1,200	100%
EASE	\$10	\$10	\$250	\$250	\$429	—	\$560	\$560	\$1,249	\$372	30%
Flying Club	\$100	\$100	\$600	—	\$1,000	\$1,000	\$100	\$100	\$1,800	\$1,200	67%
GaMIT	—	—	—	—	\$301	\$301	\$620	\$620	\$921	\$921	100%
Gilbert and Sullivan	—	—	—	—	\$240	\$240	—	—	\$240	\$240	100%
Global Poverty Initiative	—	—	—	—	\$2,194	\$1,184	\$176	\$176	\$2,370	\$1,360	57%
Go Club	—	—	\$400	\$400	—	—	\$115	\$115	\$515	\$515	100%
Gospel Choir	\$600	\$350	\$195	—	\$3,790	—	\$360	\$360	\$4,945	\$360	7%
Hawaii Club	—	—	—	—	\$2,050	\$300	\$100	\$100	\$2,150	\$300	14%
Hillel	\$200	\$200	\$300	\$300	\$2,704	\$1,000	\$213	\$213	\$3,417	\$1,713	50%
Hindu Students Council	\$320	\$20	\$130	—	\$1,380	\$1,380	\$100	\$100	\$1,930	\$1,500	78%
Imobilare	—	—	—	—	\$1,000	\$1,000	—	—	\$1,000	\$1,000	100%
Intervarsity	\$35	\$35	—	—	\$385	\$385	—	—	\$420	\$420	100%
Joint Theatre Groups	—	—	\$8,450	—	—	—	—	—	\$8,450	—	0%
Komaza	—	—	—	—	\$40	—	\$2,200	\$2,200	\$2,240	—	0%
Korean Students Association	\$80	\$80	\$370	\$120	\$950	\$850	\$150	\$150	\$1,550	\$1,200	77%
La Union Chicana por Aztlan	—	—	—	—	\$2,186	\$1,686	\$130	\$130	\$2,316	\$1,816	78%
Lab for Chocolate Science	—	—	\$80	\$80	\$200	\$200	—	—	\$280	\$280	100%
Latter Day Saint Student Association	\$405	\$330	—	—	—	—	\$50	\$50	\$455	\$380	84%
Live Music Connection	—	—	\$719	—	—	—	—	—	\$719	—	0%
Logarhythms	\$900	—	\$1,684	\$1,684	\$1,000	\$1,000	\$500	\$500	\$4,084	\$2,734	67%
Mentor Connection	\$53	\$53	—	—	\$1,671	\$1,021	\$103	\$103	\$1,827	\$1,177	64%
mitBEEF	\$50	\$50	—	—	\$1,000	\$500	\$150	\$110	\$1,200	\$660	55%
Mocha Moves	—	—	\$280	\$280	\$100	\$100	—	—	\$380	\$380	100%
Muses	\$100	\$100	—	—	\$200	\$200	\$150	\$150	\$450	\$450	100%
Nigerian Students Association	—	—	—	—	\$450	\$450	\$30	\$30	\$480	\$480	100%
NOBCChE-MIT	—	—	—	—	\$1,000	—	\$50	—	\$1,050	—	0%
OrigaMIT	\$100	\$100	\$140	\$140	\$50	\$50	—	—	\$290	\$290	100%
Palestine	\$28	\$28	—	—	\$310	\$310	\$125	\$125	\$463	\$463	100%
Pro-Life	—	—	—	—	\$150	\$150	\$60	\$60	\$210	\$210	100%
Protestant Student Community	—	—	—	—	\$60	\$60	\$53	\$53	\$113	\$113	100%
Quidditch	\$200	—	\$300	—	\$400	—	\$100	—	\$1,000	—	0%
Quizbowl	\$1,593	—	—	—	—	—	—	—	\$1,593	—	0%
Ridonkulous	\$200	—	\$250	—	\$1,050	—	\$350	—	\$1,850	—	0%
Science Fiction Society, MIT	—	—	\$1,700	—	—	—	—	—	\$1,700	—	0%
Shakespeare Ensemble	—	—	\$100	\$100	—	—	—	—	\$100	\$100	100%
Society of Hispanic Professional Engineers	—	—	—	—	\$280	\$280	\$50	\$50	\$330	\$330	100%
South Asian American Students	—	—	—	—	\$1,780	\$480	\$30	\$30	\$1,810	\$510	28%
SEALNet@MIT	\$363	\$90	—	—	\$2,308	\$1,200	\$50	\$50	\$2,721	\$1,340	49%
Starleague	\$135	—	—	—	—	—	\$80	—	\$215	—	0%
Strategic Games Society	—	—	\$220	\$200	\$100	\$100	\$45	\$45	\$365	\$345	95%
Students for Israel	\$16	\$16	—	—	\$2,040	\$900	\$225	\$100	\$2,281	\$1,016	45%
SEDS	\$500	\$500	—	—	\$620	\$620	\$500	\$500	\$1,620	\$1,620	100%
Syncopasian	\$2,000	\$500	—	—	\$250	\$250	\$150	\$150	\$2,400	\$900	38%
Techiya	—	—	\$80	\$80	\$350	\$350	\$50	\$50	\$480	\$480	100%
Traditional Medicine Society	—	—	—	—	\$775	\$775	\$210	\$130	\$985	\$905	92%
Undergraduate Biochemistry Association	—	—	—	—	\$150	\$150	\$15	\$15	\$165	\$165	100%
Universities Allied for Essential Medicine	\$260	\$80	—	—	\$2,180	\$770	\$184	\$184	\$2,624	\$1,034	39%
TOTAL	\$14,830	\$6,374	\$21,540	\$4,396	\$54,887	\$30,416	\$11,078	\$5,930	\$102,335	\$47,116	46%



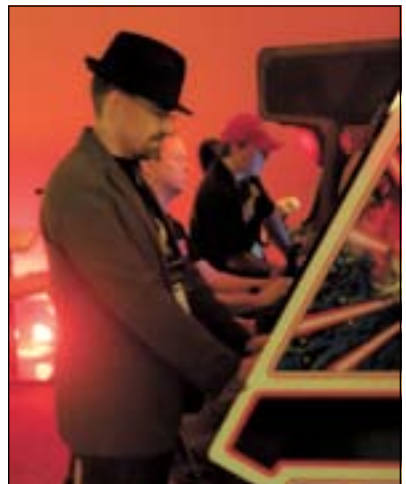
PAX EAST

By Jessica J. Pourian
STAFF COLUMNIST

I was just one of 69,500 people who flocked to the Boston Convention & Exhibition Center this past weekend for PAX East — the Penny Arcade Expo — an enormous gaming convention put on by the creators of the webcomic of the same name. This was the second year that PAX came to the East Coast — the original expo (now known as PAX Prime) takes place in Seattle in late summer.

With over 170,000 square feet of space, the exhibit hall this year dwarfed last year's display in the much smaller Hynes Memorial Convention Center. Enormous booths from Ubisoft and Nvidia dominated the landscape while *Portal 2*, a huge Pikachu, *Battlefield 3*, *Duke Nukem Forever*, Alienware, and many other companies stood out thanks to their sizeable ceiling banners.

Jane McGonigal, author of *Reality is Broken*, delivered the opening keynote of PAX, which I missed, sadly, because of class. Convention panels highlighted



GREG STEINBRECHER—THE TECH

Some of the best arcade game players in the world try to set records at PAX East.

numerous aspects of gaming, from the music (folks from Ocremix.org gave a talk about remixing game music) to parenting (guests from Geekdad.com) to making your own game, breaking into the industry, illustrating a comic, and, of course, the gamers' charity, Child's Play.

As is tradition, concerts — which were included in admission — were held on both Friday and Saturday night. All of the artists from last year except

...Cave Johnson, the founder of Aperture Science,

Anamanaguchi returned to play this year: *MC Frontalot*, *Metroid Metal*, the Video Game Orchestra, the Protomen, Paul and Storm, and Jonathan Coulton (who wrote the *Portal* hit "Still Alive"). Most artists were available during the day for autographs; unsurprisingly, Coulton's booth was the most popular.

The exhibit hall, located on the first floor of the gargantuan convention center, was full of demos and videos from developers around the industry. Nintendo debuted their 3DS, which looked cool, but lost the 3D effect if held incorrectly. The *Legend of Zelda: Ocarina of Time* remake for the system was available to demo, which had the longest

line at their booth. Ubisoft displayed most prominently its *Child of Eden*, a motion-controlled Kinect game where you help clean up a futuristic internet by shooting viruses. Though the game-play idea was very simple, I was awed by the colorful and vibrant style of its art. I sat in on the *Battlefield 3* presentation, which was just 25 minutes of watching an exhibitor play the game in real time — the graphics are stunning. Alienware, Nvidia, Newegg, and

a number of other product developers and merchants offered swag to passerby and held mini-games (such as spinning a wheel) with merchandise giveaways as prizes.

As a long-time *Portal* fan, my favorite booth was easily the *Portal 2* display. An enormous box with new characters painted on the sides housed a small screening area where patient fans could watch the opening cutscene of the new game and get introduced to the cast, including Cave Johnson — founder of Aperture Science — who is voiced by J.K. Simmons of *Spiderman* fame. The 10 minute video was witty, entertaining and is now available on Youtube



GREG STEINBRECHER—THE TECH

A case mod of *Divx*, a character in *Penny Arcade*, was featured holding a bottle of Wild Turkey.



QUENTIN SMITH—THE TECH

Darth Maul from *Star Wars* shows up at the convention to promote *The Old Republic*, an upcoming MMO.

(search "portal 2 PAX East 2011"). The new *Portal* will be 2.5 to 3 times the length of the first game and will feature an extensive cooperative mode. It will be released on Xbox 360, PS3, and PC on April 19.

Attendees at the conference were often spotted with the standard G4-themed swag bag, a giant *Dragon Nest* (a new anime-style MMO from Japan in which you fight dragons to save a damsel) goodie bag, Nvidia buttons (if you found someone with the same number button you could win a prize ... or a kiss), as well as numerous types of merchandise.

I ended up blowing \$40 on an Amaterasu (the wolf character of *Okami*) plushie. Capcom was selling as a promotion for their new DS game *Okami Den*, sequel to the critically acclaimed PS2/Wii game *Okami*. Within a few minutes arriving at PAX, I saw someone with the toy and had to have one. The plushies sold out the first day and are now on eBay for hundreds of dollars (no, I'm not selling mine). The DS game shares the same beautiful calligraphy art style of its predecessor and uses the stylus as a brush to draw symbols that represent attacks. If you haven't picked up the original *Okami* yet, I highly suggest you do so — it's excellent.

Besides the incredible exhibit hall, there was plenty to do at the convention. Console, tabletop, and handheld gaming each had free play and tournaments all weekend. Omegathon, a team tournament with an eclectic assortment of games and an integral part of PAX, returned this year. Since I didn't attend any of the Omegathon events (lame, I know, I couldn't sit still for most of the convention and thus didn't

attend very many panels), I don't know what the final round was, but the main games were *Katamari Damacy*, *Bananagrams*, *Jenga*, and *Operation*.

The highlight of the show for me was the same as it was last year: the Q&A with *Penny Arcade* creators Mike Krahulik (Gabe) and Jerry Holkins (Tycho) on Sunday (I missed Friday's Q&A). Introduced with Cassidy's "I'm a Hustler" blasting with deafening bass, the two stars simply walked on the stage clad

in plain clothes — a stark contrast to the dramatic background music.

A number of the initial questions from the audience for the two were actually fans offering donations — raised through local fundraisers and tournaments — for Child's Play. Child's Play is a charity Krahulik and Holkins created in 2003 that donates toys and video games to children's hospitals to improve the lives of sick children. Each donation was greeted with warm applause and cheers from the audience. Holkins described the homegrown tournaments as "the moonshine of charity."

Not everyone had a traditional question. One fan boasted of getting "a Catholic priest to play [Dungeons and Dragons] ... he was a paladin." Another rapped about how awesome PAX is. Several audience members asked for hugs from the creators or to have their entrance badges signed. After several such requests, Holkins declared they would not sign anything else — until the next "question" was a man proposing to his wife and then asking them to



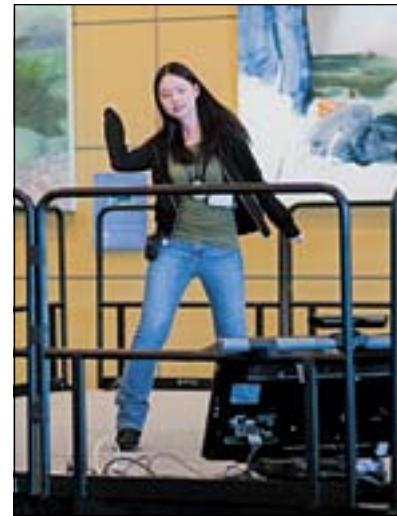
GREG STEINBRECHER—THE TECH

A cosplayer dresses up as Sarah Kerrigan from *Starcraft*.



GREG STEINBRECHER—THE TECH

A *Metroid* fan dressed as Samus Aran plays *Rockband* with other attendees. There were several *Rockband* stations set up around the PAX East convention.



GREG STEINBRECHER—THE TECH

An attendee plays *Dance Central*, a Kinect game by Harmonix.

sign his wedding guest book. He proposed retroactively — he had suffered from severe "social anxiety" the year before and could not manage "a public proposal," he said to laughs.

Many comments from the audience simply thanked the creators for the wonderful convention. A man in a wheelchair asked them to bless his new prosthetic leg — hold it like Simba in the *Lion King*, he requested — which Holkins did to wild cheers.

"It's the best convention in the world," Holkins said to all the thanks. He and Krahulik don't think of PAX as something they put on anymore. "It just occurs, it's like a season, an organic event."

When asked what could potentially end *Penny Arcade*, Krahulik replied, "a bullet."

...[is] voiced by J.K. Simmons of Spiderman fame.

In response to a question about the possibility of an animated *Penny Arcade* cartoon, Krahulik replied that it was something they have been interested in for a while, but that they were "not willing to give up rights" to the characters.

Answering a question about tips to lead a *Dungeons and Dragons* game, Krahulik replied "One, steal ideas. Two, they are not your friends. Give them an adventure, make them scared. Don't let your friendship get in the way of murdering them."

"Don't actually murder them," Holkins added. "That can be a problem."

The two men also dispensed advice on parenting. "You're going to see some shit, man," Holkins said. "You have to suffer," he added, pointing out that adults cannot play violent video games in front of their kids and must wait until they are asleep.

Plans for the future include helping with a game for the *Minecraft* creators, continuing regular comics and PAX, and Krahulik's new project, *Sketch Buddies*, which is still under wraps (check *Penny Arcade* for more details in the coming weeks).

Though cosplay — wearing character costumes — is not as common at PAX as it is at some other conventions like Comic-Con or Anime Boston, there were still a number of people in costume. I saw a few Pikachus (including a couple with the boy as Ash Ketchum and the girl a somewhat scantily clad Pikachu), a Yuna, several Samus Arans (both with and without armor), and quite a few Marios and Luigis.

I was most struck by one girl who stood behind me in line wearing a homemade, spandex Zero Suit. Samus's Zero Suit, for those of you who don't know, is a skin-tight blue body suit the heroine wears beneath her famous orange armor. The girl was pretty and looked great in her costume — but seemed incredibly uncomfortable from the number of men constantly asking her for pictures. In the five minutes I stood in line with her (waiting to take a picture inside of a mechanical exoskeleton advertisement for *Red Faction: Armageddon*), at least six guys asked for a photo with her. Some just stood next to her, while a few others put their arm around her and pulled her closer. She seemed jittery when spoken to by strangers, looked unhappy, and only gave me a terse "thanks" when I told her that her costume was great. It's possible she was in a bad mood for some unknown reason, but her attitude really threw the sexism of the entire show



GREG STEINBRECHER—THE TECH

A female cosplayer dressed as Yuna from *Final Fantasy X* poses for a photo.

into my face.

Sexism in video games and gaming culture is no surprise to anyone, but it still managed to catch me off guard. Maybe it's because I'm a girl and I've played games for so long that I hadn't noticed this particular role of girls in games, but I'm currently in 9.75 (Psychology of Gender and Race), and once I starting thinking about it, it was difficult to stop. Don't get me wrong — I didn't feel persecuted or uncomfortable during PAX, and I had a great time, but I began to wonder about the role girls play.

Did the girl behind me expect that amount of attention? Many would say she would be stupid not to, but maybe she just wanted to show off her favorite character and carefully crafted costume. What about the number of "booth babes" at the show? Women in skintight, short yellow dresses attracted people to the Sprint stand, and a megaphone regularly announced it was "time to talk to the ladies!" and gave tips about picking up girls (look them in the eye, speak coherently, etc.). Like a number of other booths, *Duke Nukem Forever* had a few women in very skimpy school girl outfits that visitors could take pictures with. I saw one "babe" on her break hastily leave the booth, her tiny top covered by a large black T-shirt.

I even received a few e-mails from developers that told me to visit them because "they might have a few pretty girls to look at!" At one of the panels I attended, audience members communicated with panelists via PictoChat (the chat room built into the Nintendo DS), and the panelist mentioned that someone complained that there "weren't enough naked girls." (For context, this comment came after a slide of a shirtless man.)

The Samus Aran I saw chose to wear her outfit, as did a number of other female attendees with revealing costumes. This didn't necessarily make PAX "sexist," but the "female objectification" aspect is interesting. This trend is enormously common in games themselves (hence the costumes), and the number of strong female protagonists is also low — Samus is one of the only very famous ones. Why is this? It is true that the consumer base for video games is largely male, but the female base is rapidly growing. PAX East is certainly not at fault for the amount of sexism in games, but definitely served as a reminder.



GREG STEINBRECHER—THE TECH

The Tech's Jessica J. Pourian '13 interviews "Thorkon," the creator of a case mod who is dressed as Bo.



GREG STEINBRECHER—THE TECH

A fan plays *Duckhunt* in the classics video game room at PAX East.

Besides sexism in games, there is also the issue of racism. The Singapore-MIT GAMBIT Game Lab had a strong showing at PAX. Their large booth showcased a number of games created by summer interns from 2009. The games are each created around a particular research question and are aimed at eventually improving machine intelligence. One of their most striking exhibits was their "Hate Speech" video. The experiment was simple: create a gaming handle such as "PROUD_2B_MUSLIM" and play an online game like *Halo: Reach* or *Call of Duty*. Dialogue between players was recorded and read

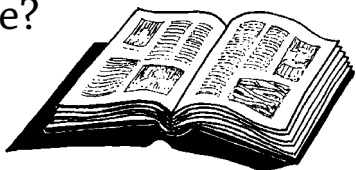
aloud in the video. The result was an outpouring of unprovoked hate speech towards the player, just centered around the handle. The video can be viewed online at <http://gambit.mit.edu/projects/hatespeech.php>.

Despite a couple of the negative aspects of gaming culture that were evident at the convention, PAX East was a wonderful time. The sense of gaming community and the number of fun things to do kept the weekend very entertaining (if not exhausting!). PAX stopped for the closing ceremonies at 5:30 p.m. Sunday evening, but it will be back next year. The creators have booked the Boston Convention Center through 2013 and plan to make the expo a regular occurrence that Bostonians can look forward to every year.

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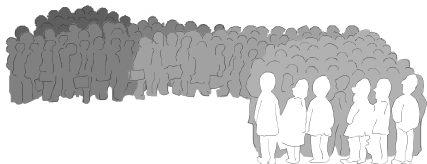
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Solution to Techdoku
from page 14

5	4	3	6	1	2
3	2	1	4	5	6
1	6	5	2	3	4
6	5	4	1	2	3
2	1	6	3	4	5
4	3	2	5	6	1

Solution to Sudoku
from page 14

6	9	5	4	2	8	1	7	3
8	4	3	1	5	7	2	6	9
2	1	7	3	6	9	5	4	8
1	8	6	5	7	4	9	3	2
4	5	9	2	3	1	6	8	7
7	3	2	9	8	6	4	1	5
3	6	4	7	9	5	8	2	1
9	7	1	8	4	2	3	5	6
5	2	8	6	1	3	7	9	4

Institute replies vacuously to Styke suit

On Tuesday, MIT submitted its response to Wolfe B. Styke G's lawsuit. Styke is suing the Institute and Russell J. Novello for a total of \$50,000 in negligence, resulting from the October 2007 incident where he was stabbed in his Next House dorm room by Anna L. Tang, who was a Wellesly student at the time. Novello was the security guard who provided Tang with a key to Styke's room. Tang was found not guilty by reason of insanity late last year and is fully free as of early this year.

- MIT offers several defenses including:
- Massachusetts law limits liability of charities to \$20,000. MIT counts as a charity.
 - Styke "fails to state a claim upon which relief may be granted," meaning that the suit is without merit.
 - Styke's claims may be partially barred by his own negligence ("contributory negligence").
 - MIT's actions were not the cause of Styke's injuries; they resulted solely from the actions of third parties.
 - The suit is barred by statutes of limitations.

MIT also offers 14 points of answers to the 14 allegations in Styke's complaint. In them, MIT denies all the allegations or classifies them as not requiring response, other than admitting its address and corporate status, admitting that Styke "was enrolled as a student at MIT and was assigned a room in a dormitory," and admitting that Novello was an employee.

Novello does not appear to have filed a response to the suit according to the court's electronic docket.

—John A. Hawkinson

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MIT rallies funding

Japanese Association raises \$17K

Japan, Page 1

Electric Power Company's (TEPCO) Fukushima Daiichi nuclear power plant were evacuated as tsunami waters killed the generators and the reactor cooling systems began to fail.

As of Wednesday night, CBS reported the death toll neared 4,000 in Japan while more than 8,000 people were unaccounted for. Communication was crippled, cities were destroyed, and food, drinking water, medicine, and fuel shortages became the norm. Nearly half a million people were left homeless in the aftermath of the quake and tsunami. Damage is estimated to be \$200 billion.

Kern and Gercik remained in the Tokyo area over the weekend, but even when train service started up again, fewer trains than usual were running. As more and more of their Monday meetings were cancelled, they decided it was time to head home, arriving in the U.S. on Monday afternoon.

Because phone service was down, Kern relied on e-mail to communicate with her contacts in Japan.

Fortunately, there are no current MISTI students in Japan. On Sunday, the U.S. Department of State recommended that "all non-emergency official U.S. government personnel defer travel to Japan" and urged "U.S. citizens to avoid tourism and non-essential travel to Japan at this time."

Kern is optimistic about the summer, noting that the program still has a couple months to prepare for interns traveling to Japan. According to Kern, host companies in the Osaka area — about 400 miles away from the epicenter — experienced "no real effects" from the disaster, and the hosts she talked to in Tokyo say "they think they'll be fine" for internship placements over the summer. Kern said MISTI students are still looking forward to their travel to Japan, too.

"We're doing everything to make sure host companies are okay" with continuing the internship plans and are "keeping students well-informed" of any updates, said Kern.

Kern says she didn't feel a sense of panic during last weekend's stay in Tokyo. "It was a totally different experience depending on where you were." Areas close to the Honshu coast in the Tōhoku region experienced evacuations, flooding, high death tolls, and destroyed buildings. However, Tokyo was mainly concerned with problems in transportation and supply as food shelves at grocery stores were emptied by concerned residents.

"The press did not really give out too much information, and one felt that there was every effort by the government to avoid panic. By the end of the weekend, the shelves of all convenience stores were empty," Gercik said. "There was no sense of panic, but one of disbelief."

Still, Tokyo was not without serious problems. Five people in Tokyo died as a result of a building collapse, according to Kern.

Professor Richard J. Samuels, director of MIT's Center of International Studies (CIS), noted that MIT tends to take two types of responses to international disasters such as Japan's: humanitarian aid and analytic discussion. The CIS, he said, offers opportunities for the latter: "When there's a crisis, we try to organize an event to share what we know. It's our mission."

By bringing in experts on the topic — such as faculty from MIT's Nuclear Science and Engineering (NSE) department — and organizing public Starr Forums, it is the CIS's hope to educate the MIT community on the technical background of the nuclear reactor problems.

The CIS took a similar approach in response to the 9/11 attacks and

crises in Gaza and Egypt earlier this year.

"We each do what we can do according to our abilities," Samuels said. At MIT, he remarked, there is "so much talent and willingness to fix what is broken."

Students respond with aid

Miho Kitagawa '14, a member of the Japanese Association of MIT (JAM), made one of the first moves towards a campus-wide charity event by announcing JAM's donation drive in Lobby 10 and the Stata Center in an e-mail to dorm lists.

Along with collecting funds for disaster relief in Japan, JAM also encouraged passersby to leave a message for the afflicted in Japan. The messages were written on a white board, and the JAM members took pictures of the message and its author (see sidebar). These messages, Kitagawa said, are a "really huge thing." Money can certainly help victims, but letting the Japanese people know that someone else in the world is thinking of them will make those afflicted feel much stronger in light of their tragedy, Kitagawa hopes.

The response has been overwhelming. Kitagawa faced a deluge of e-mails, especially from student groups looking to help. The American Red Cross Team and Network of MIT (ARCTAN) offered to reward

Kern is optimistic, noting that MISTI still has a couple months to prepare for interns traveling to Japan.

donations with bread from Au Bon Pain, while Victoria W. Lee '10, a member of the Figure Skating Club, said the club wanted to hold an additional fundraiser to supplement JAM's efforts.

Although it's a lot to work with, Kitagawa said, "It's really nice. I really appreciate it because everyone's helping us."

Looking at pictures of the devastation in Japan, Kitagawa said her first thought was, "I can't believe it's Japan."

With 50 members, JAM is a group of mostly Japanese international students, the majority of whom are graduate students. Kitagawa has been in touch with her family, who lives far from the epicenter in Japan, and friends in Ibaraki, who experienced the loss of food, water, and electricity plaguing the afflicted areas.

On Monday night, JAM had already collected about \$4,000, and Kitagawa said her hope was to collect \$2,000 each day for the rest of the week. On Thursday night, they had already surpassed this goal, reporting more than \$17,000 in funds raised and more than 500 messages collected, according to their website, <http://web.mit.edu/jam/>.

Camilla M. Brinkman, communications coordinator of the Public Service Center (PSC), stressed that "We want to be as supportive as we can." While the office does not hold its own events, Brinkman said its goal is to be a "set of extra hands to help with disaster relief." The PSC posted news about events relating to the crisis on its website, <http://web.mit.edu/mitpsc>, and supported the JAM with their donation drive. In the past, the PSC has helped students organizing disaster relief events with grants, advertising, setup, and donation coordination.

JAM received further help from the MIT Figure Skating Club (FSC), which held a benefit skate yesterday at Johnson Ice Rink and raised \$1,345. An exhibition by FSC members was followed by a period of open skate lessons for attendees.

Lee, a member of the FSC competition committee and four-year

Coop Student Board of Directors Election Update

The following student Coop members have been nominated by the Stockholders as candidates for the Board of Directors for the 2011-2012 academic year.

MIT Undergraduate Students:
Elizabeth Burton
Christopher Yoon

MIT Graduate Students:
Lorena Buck, PhD, 2012
Paul Romano, PhD, 2012

Harvard Undergraduate Students:
Cody Dean 2014
Melissa Oppenheim 2012
Caroline Quazzo 2012
Jillian Smith 2014
Aixin Wang 2012

Harvard Graduate Students:
Eugene Anthony, M Div., 2012
David Carvel, MBA, 2012
Christofer Garner, MBA, 2012
Sonia McNeil, JD, 2012

Any student Coop member may petition to be a candidate on the election ballot. A Petition application is available online at www.thecoop.com.

The Petition period is March 14 to March 28, 2011. For complete Petition rules consult the information posted in the election section on the Coop website at: www.thecoop.com.



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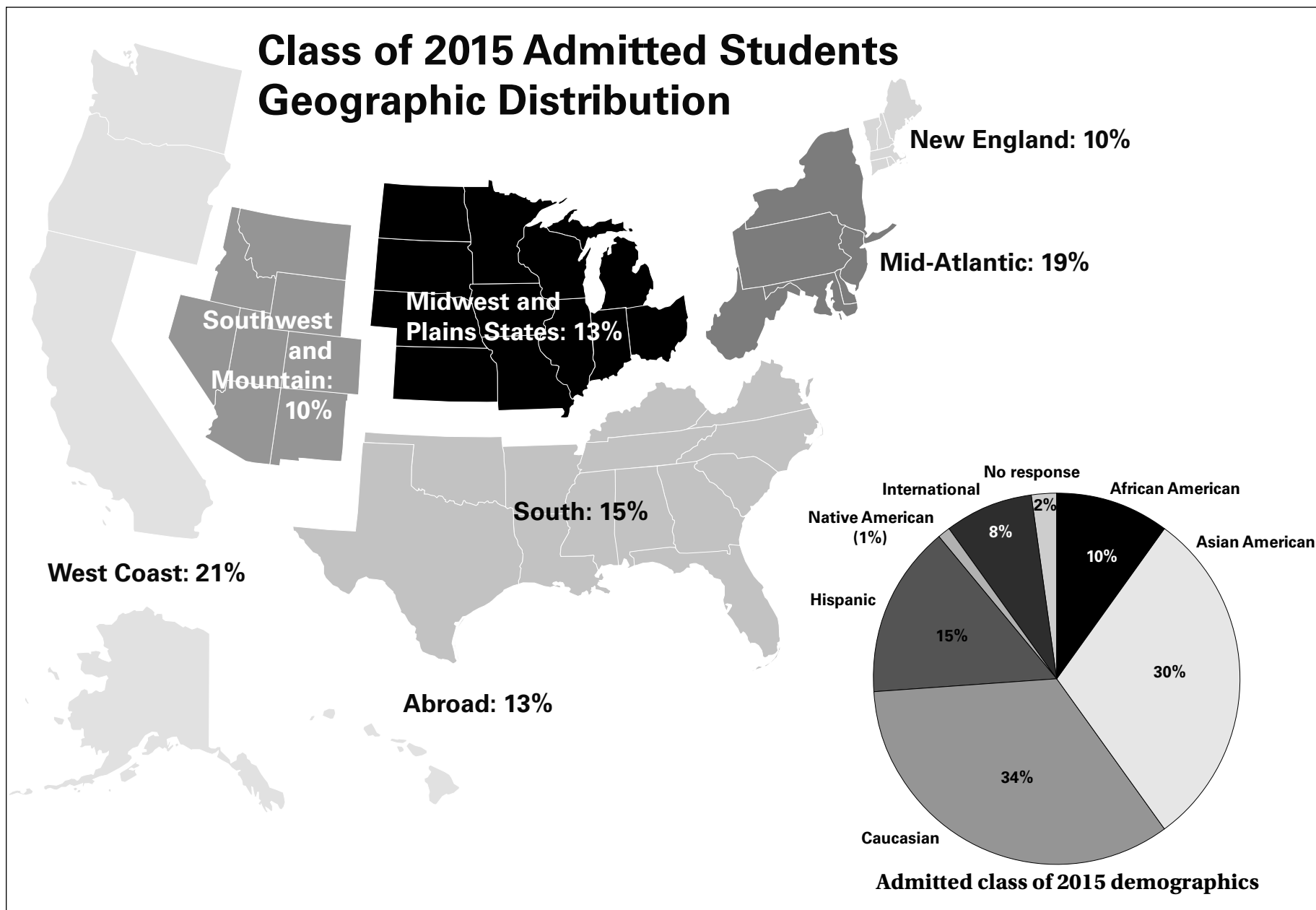
Deadline:

March 30th, 2011 at 12 Noon

INFOGRAPHICS BY JOANNA KAO

The numbers are in!

Class of 2015 Admitted Students Geographic Distribution

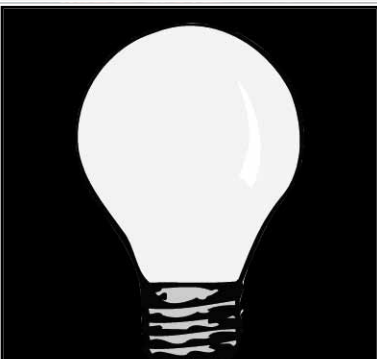


Only 9.6 percent of applicants for the class of 2015 were accepted this season. Above, the ethnic and U.S. geographic breakdown of admitted students (13 percent of admitted students do not live in the U.S.).

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Solution to Crossword
from page 15

A	S	P	I	C	J	A	D	E	S	O	B	S
W	I	L	D	E	I	N	E	P	T	M	O	E
S	P	E	L	L	I	N	G	B	E	E	L	L
T	Y	I	N	G	S	E	T	T	L	E	D	
A	C	H	A	U	L	D	A	E	R	O		
S	L	O	B	P	E	E	P	I	N	G	T	O
K	O	R	E	A	A	I	M	A	T			
P	A	R	T	S	O	F	S	P	E	E	C	H
M	O	I	R	E	S	A	L	A	D			
E	E	C	U	M	I	N	G	S	M	A	Z	E
S	P	U	D	S	A	I	L	R	Y	E		
T	I	T	A	N	I	C	S	K	U	L	K	
O	L	E	E	C	H	O	C	H	A	M	B	E
P	O	S	S	E	E	Y	A	U	N	A	R	M
S	G	T	S	T	R	E	P	S	O	R	E	S



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US relations with Saudi Arabia chilled

Saudi and Iranian interests create Middle East diplomacy dilemma

By Helene Cooper and Mark Landler
THE NEW YORK TIMES

WASHINGTON — The brutal crackdown in Bahrain poses the greatest Middle East democracy dilemma yet to the Obama administration, deepening a rift with its most important Arab ally, Saudi Arabia, while potentially strengthening the influence of its biggest nemesis, Iran.

Relations between the United States and Saudi Arabia have chilled to their coldest since the American invasion of Iraq in 2003. Saudi officials, still angry that President Barack Obama abandoned President Hosni Mubarak of Egypt in the face of demonstrations, ignored American requests not to send troops into Bahrain to help crush Shiite-led protests there. A tense telephone call between Obama and King Abdullah on Wednesday, Arab officials said, failed to ease the tensions.

“King Abdullah has been clear that Saudi Arabia will never allow Shia rule in Bahrain — never,” an Arab official who was briefed on the talks said. He said King Abdullah’s willingness to listen to the Obama administration had “evaporated” since Mubarak was forced from office.

The Saudi position is rooted in the royal family’s belief that a Shiite uprising next door in Bahrain could spread and embolden Saudi Arabia’s own minority Shiite population and increase Iranian influence in the kingdom, a fear that U.S. officials share. But where Obama and King Abdullah have parted ways, administration officials say, is on how to handle the crisis.

American officials want Saudi Arabia and Bahrain to allow political reforms that could lead to more

representation for Shiites under Sunni rule.

During his telephone conversation with the Saudi king, Obama called for an end to the violence that has accelerated in Bahrain over the past few days.

He asked for a “political process as the only way to peacefully address the legitimate grievances of Bahrainis and to lead to a Bahrain that is stable, just, more unified and responsive to its people,” according to Jay Carney, the White House press secretary.

American officials want Saudi Arabia and Bahrain to allow political reforms that could lead to more representation for Shiites under Sunni rule.

But “there’s not too much listening going on,” a senior administration official said, noting that Defense Secretary Robert M. Gates and Secretary of State Hillary Rodham Clinton were forced to cancel visits to Saudi Arabia in recent days because the king was not willing to host them. (The official reason given was that he was ill.) “There appears to be a great deal of annoyance still,” added the official, speaking only on the condition of anonymity.

A senior administration official noted Thursday that some Shiite opposition leaders had vowed not to respond in kind to the violent crackdown by the government, and to remain peaceful, raising hopes among members of the Obama administration that the

Shiite opposition has not become radicalized and might still be amenable to political dialogue. “It suggests to me that the radicalization on the part of the moderate Shia has not yet occurred,” the official said.

But, he added, “Without question, there are people on the extreme end of the opposition who have been in touch with Iran.” He said that the Obama administration had tried to convey to its allies in the Persian Gulf that the governments were most at risk if they approached the unrest only from a standpoint of their own government security.

For the administration, the stakes are higher in Bahrain and Saudi Arabia than in any other Arab country facing unrest now.

“In terms of concrete American national security interests, Bahrain-Saudi Arabia is the place,” said Robert Malley, the Middle East and North Africa program director with the International Crisis Group. Saudi Arabia is the second largest foreign supplier of oil to the United States, and Bahrain is home to the U.S. Navy’s 5th Fleet.

Even if the United States could wean itself from dependency on Saudi oil, the kingdom, home to the world’s largest petroleum reserves, still can rock global markets and slow economic recovery in the United States and around the world.

Beyond that, the United States has long viewed Saudi Arabia as a last bulwark against an ascendant Iran in a crucial region and does not want Tehran stepping in to back Shiites in Bahrain or Saudi Arabia.

But where the United States and the Saudis split is over how to prevent Iran from gaining traction. While American officials say the

Saudi and Bahraini governments can head off trouble by making political reforms, the Saudis believe that political reforms would only open the door to greater instability.

Even if the United States could wean itself from dependency on Saudi oil, the kingdom can still rock global markets and slow economic recovery in the U.S.

“Our message to Saudi Arabia is that if you want to avoid the fate of Mubarak, you need to move toward genuine and gradual reform,” said Malley of the Crisis Group. “But what the Saudis are hearing instead is that reform is actually the path to Mubarak’s fate.”

In many ways, Malley and other Middle East experts say, the crisis in Bahrain and Saudi Arabia makes dealing with Egypt and Tunisia look easy. While Egypt is another crucial U.S. ally, Obama could publicly side with the protesters in Tahrir Square without roiling global oil markets or inviting in Iran.

The Obama administration has vested a lot of its hopes of resolving the conflict in Bahrain with the crown prince, Sheik Salman bin Hamad Al Khalifa, who is leading government efforts to start a dialogue with the protesters.

The prince, a 1992 graduate of American University in Washington, was described in a 2009 diplomatic cable made public by WikiLeaks as “very Western in his approach.”

CDSA campaign meets confusion

Posters stir discussion about existence of female stereotypes

Fact or Fiction, from Page 1

Student Reactions

Although Trudeau called the response to the campaign “overwhelmingly positive,” citing positive feedback from the people who visited the Fact or Fiction photo booth and e-mails she received, many students expressed confusion about the goals of the campaign and the message of the posters.

One poster contained descriptions of the manipulative tactics of Rachel Berry from *Glee*, with half labeled “fiction” — even though all the described acts did happen on the show. In response to the “Glee: Fact or Fiction” poster, Casey L. Weber ’11 said, “I’m confused, are they saying that girls backstab each other? That doesn’t seem positive. And also, why is fact on one side and fiction on another?”

Another poster depicted a spectrum, starting from a Barbie doll labelled “BU” wearing a sundress, ending on an equally stylish Barbie labelled “MIT” holding a laptop. Between the two Barbie dolls were three similar, casually dressed women labelled “Wellesley,” “MIT,” and “BU,” in that order. In regards to “The College Girl Spectrum” poster, Daniel M. Manesh ’14 said, “I don’t understand what stereotypes this poster is trying to fight against. I guess I’m just not caught up on my stereotypes.”

“But I guess it could mean that there’s essentially no difference between BU, MIT, and Wellesley girls,” he added after a moment of thought. “That’s probably what it’s trying to say, at least.”

Other students wondered if the messages promoted by the posters were actually necessary.

Jennifer C. de Bruijn ’12 took issue with Fact or Fiction’s “The MIT Girl Spec-

trum” poster, which depicts a corseted Barbie holding a guitar on the extreme of the East Campus side, while a Barbie wearing a pencil skirt and holding a folder was shown on the West Campus side.

“I live on West Campus, and no one looks like that all the time — people just wear jeans and sweatpants,” said de Bruijn. “I also know what the stereotypes are supposed to be, but I know EC girls, and I don’t have that stereotype. These

are all interesting posters, but I don’t think there’s a problem with women at MIT.”

Marie K. Herring ’11, a member of the group that designed the media campaign, said that even if people don’t

think they hold a stereotype, this campaign can at least make them question their beliefs.

“During our focus group, a lot of people said that though they didn’t believe they held these stereotypes, upon more reflection, they’ve realized that based on what they’ve said and how they’ve acted in the past suggest that they still do. And if people really don’t have a stereotype, then at least the posters made them think about it.”

But Jennifer T. Melot ’12 agreed that the significance of the problems might have been overstated. “I don’t see the claims made on the website as being a problem. My interaction with females at MIT has been pretty warm and friendly, so I was surprised this was even an issue,” she said.

However, Herring said, “We’re trying to address the underlying cause of the statistics, which is that women aren’t seeing other women as allies. The goal of the campaign is clearly not to say that ev-

ery woman at MIT is an island or a backstabber, but that we could have a stronger and better community of women at MIT.”

According to Trudeau, “There are so many women at MIT, and of course, this campaign can’t address issues for all of them, but we felt that these issues were strong enough that we wanted to talk about them.”

“I feel like this is a good first step toward looking more closely at women’s issues on campus,” Trudeau added.

The campaign is part of the CDSA’s larger MIT Alcohol-Related Violence Initiative (MARVIN), which deals with social factors that contribute to violence as a result of alcohol consumption. In 2009, the CDSA was awarded a grant by the Department of Education to fund MARVIN, which required them to create a media campaign to “disseminate accurate student perceptions of alcohol-related violence.” To determine the subject and content of the campaign, the CDSA sent out a mass e-mail to all female undergraduates during late spring 2010, inviting them to join a focus group. Over the course of a few months, the focus group — comprised of 17 undergraduate women — met to discuss potential underlying reasons to explain the results of the earlier April 2010 alcohol-related violence survey, according to Herring, a focus group member. “We found the statistics about physical and relational aggression were higher than what we would have liked, and we came to the conclusion that it was because of stereotypes that MIT women had about other women and stereotypes from the media.”

From there, a smaller group, along with two MIT student graphic design interns, met to generate the actual content that appears on the posters.

Fact or Fiction presents the following information on their website, <http://factorfiction.mit.edu>:

A survey on alcohol-related violence disseminated to 2,400 MIT students during April 2010 revealed that:

- 12.7 percent had shoved or pushed another person.
- 9.1 percent had hit or slapped someone.
- 14.8 percent had teased someone to make them angry.
- 19.9 percent had picked on someone.
- 28.9 percent agreed with the statement, “If a woman is raped while she is drunk, she is at least somewhat responsible for letting things get out of control.”
- 27.9 percent agreed with the statement, “Rape accusations are often used as a way of getting back at men.”
- 16.6 percent agreed with the statement, “When women are raped, it’s often because the way they said ‘no’ was ambiguous.”
- 32.9 percent agreed with the statement, “Men don’t usually intend to force sex on a woman, but sometimes they get too sexually carried away.”

Targeted focus groups with undergraduate women revealed the following perceptions of MIT women:

- They have poor social, communication & conflict resolution skills.
- They don’t have anyone to really confide in.
- They are competitive in both their academic & social lives.
- They are often told that “MIT women are smart, not pretty.”
- They lack strong female friendships.
- They are territorial over MIT men.
- They stereotype women based on where they live & who they are affiliated with.
- They stereotype women from other schools.
- The media influences how they interact with other women.
- The media influences their perception of sexual assault & intimate relationships.

The MIT Girl Spectrum

fact or fiction?

EAST CAMPUS ← → WEST CAMPUS



The College Girl Spectrum

fact or fiction?

BU ← → MIT



GLEE | RACHEL

fact or fiction?

FICTION:



- Rachel compliments Mercedes on her solo then... talks behind her back
- ← Rachel sings “Bad Reputation”... to pit Puck, Finn, and Jesse against each other
- Rachel attempts to join the Acting club... to try to ruin Glee Club
- ← Rachel sends the new exchange student Sunshine to... a crack house instead of Glee Club auditions

FACT:



Flooding at East Campus



JEREMY E. DEGUZMAN

The west parallel of East Campus flooded early Tuesday afternoon due to the installation of a fire hydrant. Workers took most of the day to stop the flood.

The Fact or Fiction awareness campaign uses posters to challenge MIT undergraduate women to question the influences on their female identity. However, many students found some of these posters confusing.

SOURCE: MIT FACT OR FICTION, [HTTP://FACTORFICTION.MIT.EDU](http://FACTORFICTION.MIT.EDU)



STEVE HOWLAND—THE TECH

Members of the MIT Figure Skating Club perform a themed routine based on The Charlie Daniel's Band's song "The Devil Went Down to Georgia" during an event on March 17 to raise money for victims of the recent earthquake and tsunami in Japan. Individuals and groups from MIT and the Boston area performed a number of routines before the rink was opened for free skate. Donations and messages were collected, and proceeds from skate rentals also went toward disaster relief.



COURTESY OF GOOGLE AND GEOEYE

Kesennuma, home to more than 70,000, after the tsunami.



COURTESY OF DIGITALGLOBE

Sendai port, 60 miles from Fukushima, was devastated by the disaster.



PATRICIA E. GERCIK

The earthquake and subsequent tsunami caused a major food shortage in Japan.



MENG HENG TOUCH—THE TECH

Kenneth Oye, Associate Professor of Political Science and Engineering Systems Design, comments on the chain of events occurring in Japan and his view of the reaction of the Japanese people and government. He credited the strict Japanese building code with helping Tokyo survive the earthquake. Oye also praised the calmness of the Japanese people during the disaster and their sense of duty to help others in need, but said their response contrasted with the Japanese government's disorder in handling the nuclear crisis at the Fukushima power plant. Professor Oye was in Japan last week when the disasters occurred.

MIT's messages to Japan

Collected by the Japanese Association of MIT

Be safe! We are thinking of you! The world has you in our thoughts and prayers! :) **Japan, Good Luck!**

Be safe! We are thinking of you! We care very much!! Sending all our very best wishes! Best wishes The whole world is behind you

Thinking of the deceased and for all the survivors. Please be positive. Good luck! We are here to support all of u :) Our thoughts are with you.

The people of Japan have my support during this difficult time. **Our thoughts are with you. MIT cares!**

Good luck Japan You're not alone You are in my prayers I hope you're all okay. Please stay calm and safe. We all feel for you.

Stay strong! The spirit of the Japanese continues to inspire us. We're all thinking & praying for you & Japan's recovery from this disaster. Good wishes to you all We are here in solidarity! Our hearts are with you

Words don't fully express how we are thinking about and praying for the people affected by the earthquake. We here at MIT & America are praying for you with love!!! Our hearts are crying for the Japanese people. We are all with you.

May you be reunited with those you love. Your friends in the U.S. Our hearts are with you

My thoughts and prayers are with Japan and the wonderful and strong Japanese people. The world is with you.



Even The Tech needs tech support and we're looking for some. join@tech.mit.edu

MIT discusses technical aspects of nuclear crisis

Public forum describes Fukushima reactor explosions, NSE blogs about technical data

Japan, Page 13

FSC member, organized the event after conceiving the idea Monday morning. Within 24 hours, the rink was reserved, the event was registered, and Lee had a full program of performances for the exhibition.

"I'm extremely proud of the FSC's phenomenal response in helping out, from volunteering to skate in the show to volunteering to teach," Lee said.

Proceeds from this event will go directly to JAM. The Zesiger Center also agreed to donate all proceeds from the skating rentals.

Last January, after the magnitude 7.0 earthquake that devastated Haiti, the FSC organized a similar charity event called "Skate for Haiti."

Faculty Chair Professor Thomas A. Kochan was a leader in MIT's response to the Haiti disaster, and he says he's noticed similarities between the two situations. In response to Haiti, he said, "we knew various faculty and

The Zesiger Center also agreed to donate all proceeds from the skating rentals.

student groups had initiated a number of separate aid and recovery efforts but felt perhaps a more coordinated effort would be helpful given the limited resources within Haiti."

Commenting on the "impressive" number of campus-wide efforts, he added, "In this case, the decentralized efforts, along with the letter to the MIT community from President Hockfield and the Chancellor's good work in reaching out to our Japanese students, may be the most appropriate responses."

Discussion of the nuclear reactor crisis

On Tuesday, 10-250 was jam-packed with attendees for the MIT Department of Nuclear Science and Engineering (NSE) "Briefing on the Japan Nuclear Crisis," featuring a panel of Professor Richard K. Lester PhD '80, head of the Department of Nuclear Science and Engineering (NSE); Professor Mujid S. Kazimi PhD '73, director of the Center for Advanced Nuclear Energy Systems; NSE Professor Ian H. Hutchinson; Dr. William B. McCarthy, deputy director of the MIT Environmental Health and Safety Office; NSE Professor Michael W. Golay; and Dr. Jacquelyn C. Yanch, research affiliate of NSE.

The purpose of this public forum was to educate the MIT community with a technical description of the nuclear reactors in Japan and to answer questions from the audience.

As the panel described, the Fukushima plant consists of six boiling water reactors, but three of those (No. 4-6) were undergoing routine maintenance at the time of the disaster and were not active.

While the plant seemed to survive the earthquake "pretty well," it was the tsunami that did most of the damage that is now causing headaches for Japan. According to Hutchinson, the first hydrogen explosion at reactor No. 3 on Saturday injured four people and was followed by a second explosion on Monday morning. On this day, nuclear fuel rods were exposed after cooling water evaporated, so seawater was used to cool the rods; a third explosion, this time in the No. 2 reactor, resulted in a containment breach, which increased the opportunity for the escape of radioactivity. Within the next two days, fire broke out at reactor 4.

At one point, radiation levels in Tokyo were as high as 20 times background levels, according to Yanch, who then reasoned that one would need to be exposed to these levels for days to reach the same dosage as a single chest X-ray.

Starting on March 13, students in the NSE department maintained a blog of entries related to the Japan crisis. As the site, <http://mitnse.com>, states, "The purpose of this blog is not to provide up-to-date information about the ongoing situation at the nuclear facilities in Fukushima, Japan, nor is it to promote to a pro-nuclear political agenda. Rather, we are trying to provide non-sensationalized, factual data from engineers in a manner that the general public can understand."

The first entry comes with a brief explanation of the blog's starting point: "The original post of Josef Oehmen appeared on Morgsatlarge. Due to the large and unexpected popularity of the original post, Dr. Oehmen handed the blog to the [NSE] Department in an effort to correct the presented information and provide a starting point." Since then, posts have covered topics from radiation health effects of volatile fission products such as Iodine-131 and Cesium-137, nuclear reactor decay heat (the NSE blog describes this as the energy deposited into the fuel from the decay of radioactive isotopes), and spent fuel pools ("fuel after it has fueled a reactor," according to the blog).

On Wednesday, the MIT Center for International Studies, MIT-Japan Program, and Department of Nuclear Science and Engineering hosted its Starr Forum: Japan's Nuclear Crisis. Among the three speakers, including Samuels and Golay, Political Science Professor Kenneth A. Oye, offered his perspective after returning from Tokyo for a business meeting.

As Oye described to *The Boston Globe* in their March 11 article, Oye first felt tremors from the earthquake while sitting in a bus outside his hotel.

The "movement was far more severe than anything I've ever felt in an earthquake before," said Oye, who had lived in California and traveled to Japan during previous earthquakes, as the *Globe* reported.

The aftershocks came while Oye was in a meeting. The onset seems to come straight from a movie script. As Oye described, he first noticed the "coffee in the cup started wiggling back and forth. The chandelier started moving, and then you realize you're moving, too."

Since Tokyo is more than 200 miles away from the epicenter, Oye remarked that the scene in Tokyo was less severe than the devastation witnessed in the northeast of Honshu island.

"No one was really aware of how serious the earthquake was. ... In fact, it looked pretty normal [outside my hotel]," he said. The worst he noticed was the number of people out in the streets.

A third discussion of the nuclear reactor situation was held by the MIT Energy Club on Thursday evening, which also covered the hazards and implications of the disaster at the Fukushima plant.

On March 13, President Susan J. Hockfield wrote a letter in response to the crisis, noting MIT's wider community in Japan "from our MISTI students, through the MIT Japan program, to faculty members who work in the region or collaborate with Japanese colleagues, to our alumni who come from or have settled in Japan."

At the time, Hockfield wrote that more information from those who were "directly affected" by the disaster was being collected, but confirmed that "we have accounted for many students, staff and faculty currently in Japan and have determined that they are safe."

Along with reaching out to those in Japan, Hockfield reassured the Japanese community on MIT's own campus, saying, "Current students from Japan enrolled at MIT have been contacted in the wake of the disaster, and we are offering support and guidance."

Akira W. Monri '12 is personally connected to the crisis. He's been using e-mail and social media to keep in touch with family and friends in his hometown of Tokyo. "From what I hear from my friends in Tokyo, there are countless aftershocks, some of which are not even aftershocks and are new earthquakes."

Monri estimated that there were about four new earthquakes at about magnitude 6.0 in the days after the initial 9.0 magnitude quake.

Although far from the epicenter, Monri's friends in Tokyo have been feeling the effects: "Every time they feel the tremor, they say how scary it is, especially when they find out that it's not an aftershock. It is said that there has been over 190 aftershocks in the first three or four days."

Inconsistent information relating to the nuclear reactors is what concerns Monri the most.

"One of my friends, who is in the middle of job interviews, found out the night before that during or before her interview there may be a blackout, and had to look for alternative ways to get there. Another friend, whose family lives in New Jersey, had to leave several hours earlier than usual to get on a plane to the U.S., in order to arrive at the airport on time."

Inconsistent information relating to the nuclear reactors is what concerns Monri the most. "The U.S. Embassy has ordered U.S. military personnel helping with the relief efforts to not go within [an] 80 km radius of the Daiichi plant, which is 60 km wider than what the Japanese government has issued. That, because I do not know what the underlying facts to that decision are, is really scaring me."

Yesterday, the U.S. Department of State updated its travel warning and recommended the evacuation of all U.S. citizens within 80 km of the plant.

Monri took things into his own hands by developing a donation drive separate from JAM's, starting within his fraternity, Phi Delta Theta. "I was only able to collect over \$5,000 within three days because my brothers were here with me at the booth [in the student center] allowing it to be manned almost all seven hours." As of last night, that total had jumped to \$6,000.

"I cannot begin to explain how grateful I am to the community for their support," he added. According to his donation site, <http://phidelts.mit.edu/japan-relief.html>, "Phi Delta Theta will cover all transaction fees that may arise from sending this fund to Japan, in order to make sure that every cent donated gets to the Japanese Red Cross." According to Monri, "Phi Deltas will be around on campus even after spring break, with Japanese treats for sale to further raise the relief fund to send to the Japanese Red Cross."

Nuclear plant safety questioned by scientist group

Cambridge watchdog group accuses NRC of ignoring and delaying needed repairs

By Tom Zeller Jr.
THE NEW YORK TIMES

With Japan's nuclear industry facing intense scrutiny after the devastating earthquake and tsunami, critics of nuclear power in the United States are increasingly shining a spotlight on U.S. regulators and power companies.

In a report released Thursday, the Union of Concerned Scientists, an environmental and nuclear watchdog group based in Cambridge, Mass., accused the federal Nuclear Regulatory Commission of allowing companies that operate plants to ignore, or delay repairs to, leaky pipes, electrical malfunctions and other problems that could escalate into something more serious.

"It's like the spinning wheels on a slot machine," David Lochbaum, the author of the report and the director of the organization's nuclear safety program, said in a prepared statement. "One ingredient showing up causes a puddle on the floor. Two ingredients yield a near miss. All three ingredients showing up can cause nuclear disaster."

The report echoes more general concerns raised Wednesday in congressional hearings, when the chairman of the NRC, Gregory Jaczko, fielded questions from lawmakers about the age of the nation's nuclear plants

and whether safety and oversight procedures needed to be revisited.

David McIntyre, a spokesman for the commission, said the fact that the organization had reports of problems to scrutinize suggested that the regulatory system was working.

"We have resident inspectors stationed full time at each plant," McIntyre said, "and if they say our inspectors are catching these things then that says they're doing their job."

The report by the Union of Concerned Scientists examined 14 instances in 2010 in which significant problems at nuclear power facilities set off special inspections by federal regulators — incidents characterized by the regulators as "near misses." Reports on such incidents are made available publicly by the regulatory commission.

Twelve of the events involved lingering safety problems, among them leaky roofs and floods near safety equipment, faulty pumps, rusty pipes, fires, and inadvertent shutdowns. Two others involved compromises in plant security, though details on those were not made public.

Special inspections are typically done when a problem increases the possibility of nuclear core damage by a factor of at least 10. But the report's authors said operators should be catching and repairing those problems long before the commission or-

ders a special inspection.

The 14 special inspections involved plants in 12 states and nine corporate owners, including large players like Exelon, Duke Energy, and Pacific Gas & Electric. Progress Energy, a utility operating five nuclear facilities in the Carolinas and Florida, was singled out as being particularly problematic, with four of its plants being among the 14 that required special inspections.

In one instance described in the report, a high-voltage power cable at Progress Energy's Robinson Nuclear Power Plant, near Hartsville, S.C., failed, causing a fire. "Hours after the fire had been put out, workers re-energized the cable that had started it all," Lochbaum said. "It was still failed, and ignited a second fire."

Responding to the report, Mike Hughes, a spokesman for Progress Energy, said: "We have the highest safety standards for our nuclear plants and our employees, and we work continuously to improve safety. We remain focused on addressing each of the events last year that led to special inspections."

Questions of risk and emergency preparedness at nuclear power plants have gained new prominence globally as people watch the operators at the crippled Fukushima Daiichi Nuclear Power Plant in Japan fight to stave off a full-scale nuclear meltdown. Nuclear regulators and Obama administration officials have said they are watching the situation in Japan



Squash ends strong season

Team finishes 2nd in their bracket, 34th overall

By Carlos Greaves

SPORTS STAFF

The MIT Squash team recently closed out their season, competing in both the team and individual College Squash



Association (CSA) Championships the past two weekends. The team took second place in their bracket, placing 34th overall.

Squash is played with a ball and rackets in an indoor court with four walls that the players bounce the ball off of. The players take turns hitting the ball off the front wall, in between the "out line" near the top of the wall and the "tin," a metal plate attached to the front wall along the floor indicating the lowest valid place to play the ball.

Once one player hits the ball off the front wall, the ball can bounce any number of times off the side and back walls, but can only bounce once on the ground before the other player must play the ball. Both players stand side-by-side facing the front wall. They are not allowed to obstruct each other from getting the ball, but they constantly move around each other and try to make the ball bounce in a place where it is difficult for the other person to make a good play.

Squash traces its origins to France roughly 800 years ago; a game called "rackets" developed from the original French sport and was popular-

ized in England. When it was brought to the United States in the late 19th century, it was influenced by a variety of other racket sports before evolving into the modern game. The name "squash" comes from the spongy, "squashable" nature of the rubber ball, which can be made with different bounce and speed properties depending on the desired level of play.

Collegiate level squash in the United States is governed by the CSA, which organizes matches between 64 participating schools. In a typical match, the top nine players from each team play each other, and the team that wins at least five of those matches wins. While some college squash teams can field an all-male and an all-female squad, schools can also field a co-ed top nine, and there is no rule preventing a match between male and female players.

While there is no distinction between Division I and Division III schools in the CSA, each school is ranked according to the abilities of the players, and this ranking serves as a fairly accurate indicator of the team's ability. In the CSA championship, the 64 teams are divided into eight groups of eight players, where the top eight schools participate in a playoff, followed by the next eight, and so on. MIT was ranked between 33 and 40 and placed second among these teams at the CSA championship, beating the University of Washington and UC Berkeley before losing to Vanderbilt in

the final to place 34th out of the 64 teams. In the individual CSA competition, one player from each team, as well as the top nationally-ranked players, compete in a one-on-one bracket tournament.

Like most athletes here, the members of the squash team balance dedication to the sport and commitment to the academic demands of MIT. West D. Hubbard '14, who competed in the individual CSA tournament, described the frustration of having "our time often infringed upon by academic obligations," but that "[team] policy was always to place academic obligations over team obligations." Because of occasionally limited practice time, there is sometimes a trade-off between conditioning and court practice, both of which are necessary to improve as a player. Under the guidance of second-year coach Nadeem A. Mazen '06, the team was able to find the right combination of training methods, and they look to improve upon their training methodology next season. Mazen also credits long-time assistant coach James W. Taylor '65, who is "the lifeblood of the team," for the team's success. Taylor was honored at this year's squash nationals for "over 50 years of service to MIT and the squash community."

Lastly, and most importantly, the atmosphere of the team is friendly and inviting, which West believes is one of the main reasons students join and stay with the team.



MANOHAR SRIKANTH—THE TECH

Justin C. Helbert '14 runs to the base during the baseball game against Easter Nazarene College on Tuesday. The Engineers won 9-0 against the Easter Nazarene Lions to improve their record to 2-1.

Women's Tennis posts Colby victory

Engineers take victory with official final score of 7-2, unofficial 10-3

By Jennifer Rees

TEAM REPRESENTATIVE

MIT Women's Tennis played Colby this past Saturday, winning by an official score of 7-2 (and unofficially, 10-3).



In the doubles matches, the number one team of Lauren C. Quisenberry '14 and Candace Wu '14 was the first to play. They defeated their opponents with a decisive score of 8-0. Next up was the number four exhibition team of Jenny C. Dohlman '11 and Jennifer A. Rees '11. They also blanked their opponents, 8-0. The next team to finish was Julia C. Hsu '14 and Bianca M. Dumitrascu '13. Their match was close, and they played some aggressive net points, winning 8-4. This brought MIT into the lead over Colby 2-0. Finally the team of Melissa A. Diskin '11 and Katharine A. O'Neal '14 came off. They played a close match and attacked the net, but in the end lost 8-1, leaving MIT in the lead 2-1 going into the singles matches.

First up in singles was Quisenberry at number one. She played a tough match, both players making their shots, but Quisenberry defeated her opponent 6-1, 6-2. Hsu at three was the next person

off. She also played a good match and won 6-3, 6-1, bringing MIT ahead with a score of 4-1. At number four was Dumitrascu, who won her match with a decisive 6-2, 6-2 win over her opponent, guaranteeing MIT an overall win in the best-of-nine match. Wu at two came off next. She played a long back-and-forth match, but won 6-4, 6-3. With Wu's win MIT was up 6-1 over Colby. Diskin at six was the next one to come off. She played a tough match and fought her way back into the second set to make the match go to a tie break. Diskin lost in the tie break with an overall score of 6-3, 3-6, (10-3). Next off was the exhibition doubles match at five with Caitlin R. Pomeroy '13 and Trinity P. Leonard '13. They played a tough match but lost 8-1 to their opponents. Sonya Makhni '11 at eight singles was the next one to come off. She played a smart match, winning 7-0. Dohlman was the next off. She was playing seven singles and had a close match, winning in the tiebreaker, 9-8 (3). Finally, O'Neal at five finished her match. She played a tough match, taking three sets to win, 6-1, 4-6, 7-5. With this, MIT defeated Colby 7-2. The Engineers will travel to California over spring break and return to action on April 2 at the Wellesley Invitational.

UPCOMING HOME EVENTS

Friday, March 18

Softball vs. WPI *Briggs Field, 2 p.m.*
Softball vs. WPI *Briggs Field, 4 p.m.*

Friday, March 25

Softball vs. Babson College *Briggs Field, 3 p.m.*
Softball vs. Babson College *Briggs Field, 5 p.m.*
Men's Volleyball vs. Wentworth *Rockwell Cage, 7 p.m.*

Saturday, March 26

Women's Crew vs. Radcliffe/Tulsa *Charles River, 9 a.m.*
Sailing (Boston Dinghy Cup) *Charles River, 9:30 a.m.*
Baseball vs. Babson College *Briggs Field, noon*
Softball vs. Smith College *Briggs Field, noon*
Men's Tennis vs. Amherst College *Carr Indoor Courts, 1 p.m.*
Women's Lacrosse vs. Smith College *Steinbrenner Stadium, 1 p.m.*
Softball vs. Smith College *Briggs Field, 2 p.m.*
Baseball vs. Babson College *Briggs Field, 2:30 p.m.*
Men's Volleyball vs. Wentworth *Rockwell Cage, 7 p.m.*

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<https://isn.mit.edu/internship/index.php>

If you have questions about this program, or experience difficulty using any features on website, please contact Marlisha McDaniels- mmcd@mit.edu or the ISN Headquarters, NE47-4th Fl. 617.324.4700.

*The Army Lab provides the intern's salary, which typically ranges from \$2280/month to \$2864/month depending on class year. Under certain circumstances the ISN can provide the intern with a supplement of up to \$1500 to defray costs of local accommodations and travel.