MIT's Oldest and Largest Newspaper

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The Tech
Established 1881

WEATHER, p. 2

THU: 43°F | 32°F
Sunny

FRI: 40°F | 29°F
Chance snow

SAT: 43°F | 35°F
Mostly Sunny

Volume 135, Number 38

Thursday, January 28, 2016

Dean for graduate education aims to start new university

Ortiz, who will take leave from MIT at semester's end, has radical vision for school without lectures

William Navarre
NEWS EDITOR

Professor Christine Ortiz is stepping down from her post as dean for graduate education to found a new residential research university.

Formally, Ortiz is taking a one-year leave from the Institute beginning after the end of the academic year, Chancellor Cynthia Barnhart PhD '88 said in an email yesterday.

Whether or not she actually returns to her materials science professorship in 2017, Ortiz said, will depend on the progress of the new university.

"The goal for the next year," she said in an interview with *The Tech*,"is really to try to create a non-profit university with a new model for a research university."

The residential university she hopes to create would differ radically from what's been done traditionally. Project-based learning is the cornerstone of her vision.

"I'm looking at a new model, where the whole sort of vocabularity is different," she said. "The distinction between undergrad and grad goes away."

Ortiz said the university would focus on project-based learning and would dispense with some of the familiar hallmarks of university education, like the lecture.

"I don't see it having any face to face, on-the-ground lectures, actually," she said. "No majors, no lectures, no classrooms."

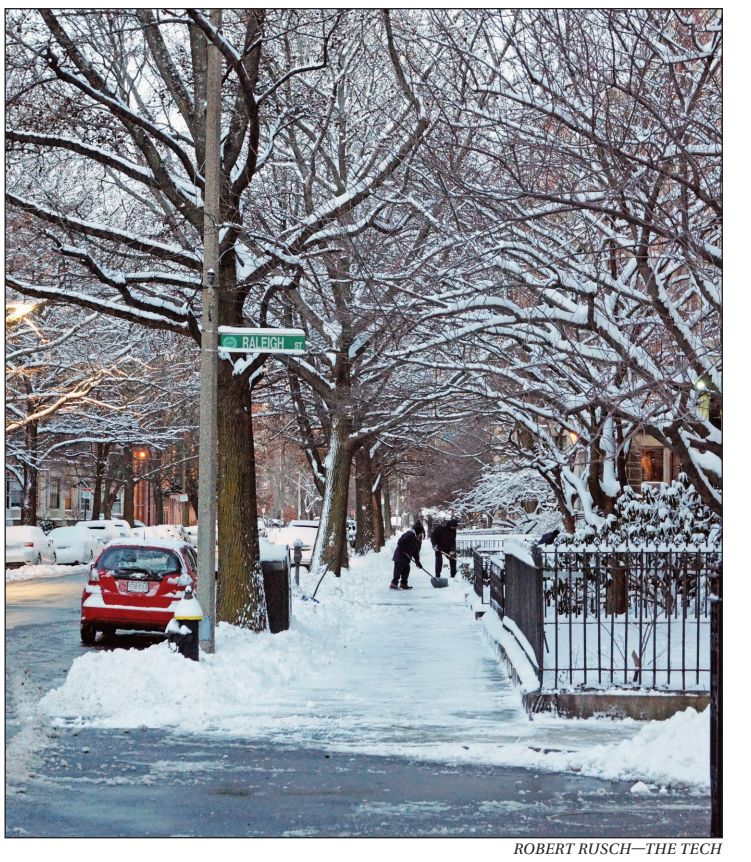
She said she has begun to assemble a team that will help shape the proposed university and help found it. After she begins her one-year leave from MIT, she will work on finalizing the team and begin the legal process of founding a university.

Ortiz said that the scope of research undertaken at the university would be broad: students would be able to work on both basic research and applied research, but also on "a vision for a startup."

The university will serve "all levels of students," Ortiz envisioned. The students will "come in and leave at different levels, after they come in and complete a project that they ... deem completed. [We hope to think] outside of the degree system totally."

Ortiz hopes that the flexibility the university is slated to offer will not prevent it becoming scalable. She said that, despite the need for a physical infrastructure to support a residential research university, she hopes her model can scale "to the same degree as online education." She hopes the university will be located in Massachusetts.

Ortiz, Page 3



ROBERT RUSCH—THE TECH

A powerful winter storm that hit the East Coast last weekend left over a foot of snow in many mid-Atlantic cities, but only a few inches in Boston. This was the first snow accumulation of a relatively mild winter.

IN SHORT

The Red Cross will be holding a blood drive in La Sala de Puerto Rico Monday, Feb. 8 through Friday, Feb. 12. Appointments are available 1 p.m. to 6 p.m. each day, except Tuesday when they are available 8 a.m. to 1 p.m. Register at http://web.mit.edu/blood-drive/

PE registration will remain open until Wednesday, Feb. 3.

xFair will take place Monday, Feb. 1, from 10 a.m. to 4 p.m.

The European Career Fair will take place Feb. 6, 2016.

The Battlecode Final Tournament will take place Saturday Jan. 30; doors open at 6 p.m.; the tournament begins at 7 p.m.

Registration day for the spring term is Monday, Feb. 1. Classes begin the following day.

The APO book exchange is accepting books through Sunday, Jan. 31 from noon to 5 p.m. in W20-415. Books will be sold Feb. 1 through Feb. 5 from 10 a.m. to 5 p.m. in W20-307.

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

MIT considers ending in-dorm summer storage for undergrads

Last year's New House flooding episode spurred plans to rethink where students store their belongings over break

Katherine Nazemi
NEWS EDITOR

Undergraduates may have to find places other than their dorms to store their belongings over the summer.

A plan to rethink dorm storage has been in the works since at least early fall. Dormitory Council members were expected to finalize details with administrators Wednesday, but did not immediately respond to requests for comment on the final arrangement.

One reason for the move away from in-dorm storage was the cost borne by MIT in relocating and storing student belongings that were damaged by flooding in New House over the summer. Students' stored items in the flooded areas had been quickly moved to Metropolitan Storage at no cost to residents.

"When New House flooded over the summer MIT had to pay a lot of money to replace people's personal things that were damaged and they weren't particularly happy about that," DormCon representative Kate M. Far-

Storage, Page 10

VIVIAN HU—THE TECH

A student calls a class of 2020 early action applicant to congratulate them on their acceptance during Wednesday's telethon. MIT Admissions will host another telethon after regular decisions are released.

OBITUARY

Marvin Minsky, AI pioneer, dies at 88

Glenn Rifkin
THE NEW YORK TIMES

Marvin Minsky, who combined a scientist's thirst for knowledge with a philosopher's quest for truth as a pioneering explorer of artificial intelligence, work that helped inspire the creation of the personal computer and the Internet, died Sunday night in Boston. He was 88.

His family said the cause was a cerebral hemorrhage.

Well before the advent of the microprocessor and the supercomputer, Minsky, a revered computer science educator at MIT, laid the foundation for the field of artificial intelligence by demonstrating the possibilities of imparting common-sense reasoning to computers.

"Marvin was one of the very few people in computing whose visions and perspectives liberated the computer from being a glorified adding machine to start to realize its destiny as one of the most powerful amplifiers for human endeavors in history," said Alan Kay, a computer scientist and a friend and colleague of Minsky's.

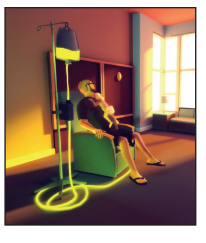
Fascinated since his undergraduate days at Harvard by the mysteries of human intelligence and thinking, Minsky saw no difference between the thinking processes of humans and those of machines. Beginning in the early 1950s, he worked on computational ideas to characterize human psychological processes and

Minsky, Page 8

AN NFL PLAYER IS STARTING HIS MATH PHD HERE
Our interview with John Urschel. **NEWS, p. 8**

IS IT JUST ME
Or is it a little warm? **WEATHER, p. 2**

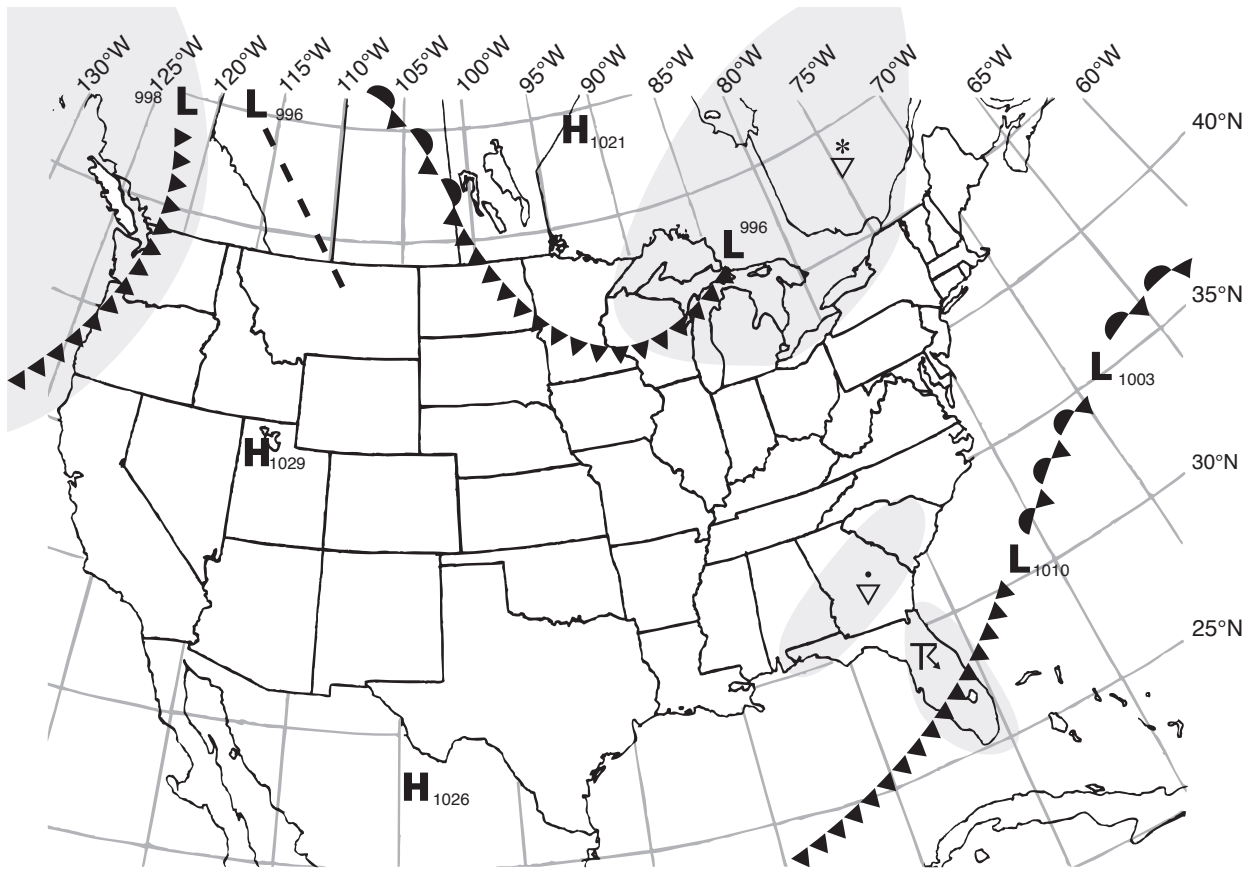
WHY D.C. WAS FREAKING OUT OVER THE WEEKEND
The blizzard, explained. **WEATHER, p. 2**



THAT DRAGON, CANCER
A new indie game tells a heartbreaking personal story through interactivity. **ARTS, p. 6**

PORTRAITS OF RESILIENCE
A CSAIL administrator talks about struggling with depression. **CAMPUS LIFE, p. 4**

SECTIONS



Situation for Noon Eastern Time, Thursday, January 28, 2016

Weather Systems	
H	High Pressure
L	Low Pressure
§	Hurricane

Weather Fronts	
	Trough
	Warm Front
	Cold Front
	Stationary Front

Precipitation Symbols	Snow	Rain
Showers	*	•
Light	*	•
Moderate	**	••
Heavy	***	•••

Other Symbols	
	Fog
	Thunderstorm
	Haze

Compiled by MIT Meteorology Staff and *The Tech*

WEATHER

A blizzard in review

By Costa Christopoulos
STAFF METEOROLOGIST

As forecasted in the previous issue of *The Tech*, the Boston area witnessed only a snippet of this past weekend's potent winter storm. The storm dumped over 30 inches of snow at various locations in Mid-Atlantic region, setting numerous records. Early Saturday morning, an unstable atmosphere led to numerous reports of thundersnow, a phenomenon that's only observed about six times a year in the U.S. Analogous to a summertime thunderstorm, these convective storms are accompanied by lightning, thunder, and sometimes hail stones.

The severity of the blizzard — which caused 48 deaths and roughly a billion dollars in damage — left many asking what contributed to its rapid intensification and maintenance. This weekend's blizzard drew in warm, energy-rich air modified by what NOAA has noted to be the strongest El Niño on record, which may have contributed to its strength. Shortly before the storm intensified, global weather models and satellite data revealed an influx of warm, moist air originating above Pacific ocean waters about 2 °C above average. East Coast winter weather systems are typically driven by temperature and moisture gradients between relatively warm oceanic air over the Atlantic and cool continental near the coast. With a powerful high pressure system over the northeastern U.S. plunging cold air southward and warm oceanic air being drawn inland, the winter storm quickly intensified and broke numerous snowfall records.

Small storm, then warm

By Vince Agard
STAFF METEOROLOGIST

A combination of storm systems will bring a chance of snow showers to the Institute on Friday, punctuating a streak of milder-than-normal weather.

A deep low pressure system currently over the Great Lakes will merge tomorrow with a coastal storm currently forming off the coast of the Carolinas, spreading the possibility of snow showers across New England in the process. Any accumulation will be small, however — an inch at most — and temperatures climbing to near 40°F (4°C) will likely keep the snow from sticking.

Otherwise, a pattern of relatively warm weather will persist. The temperature at Boston's Logan Airport broke the 50°F (10°C) mark for the first time in over two weeks on Tuesday, and high temperatures are expected to remain above the climatological normal of 36°F (2°C) for at least the next few days. Medium-range numerical models show an upper-level ridge being positioned over the U.S. East Coast, leading to anomalously warm temperatures, and pushing the tracks of storms further northwest. With storms tracking to the northwest of Boston, the area is more likely to experience warm fronts, and precipitation is more likely to fall as rain rather than snow. While it's not possible to forecast specifics many days in advance, this general pattern looks to hold at least through next week.

Extended Forecast

Today: Sunny, high 43°F (6°C). Winds S at 10-15 mph.
Tonight: Becoming cloudy, low 32°F (0°C). Winds light and variable.
Tomorrow: A chance of snow showers, high 40°F (4°C). Winds NW at 10-15 mph.
Saturday: Mostly sunny, highs in the mid 40s °F (6°C).
Sunday: Partly sunny, highs in the upper 40s °F (9°C).

CORRECTIONS

An article about this year's Mystery Hunt published last week included several errors. The article incorrectly stated that Setec had won Mystery Hunt in 2002, 2005, and 2009; in fact, before this year, Setec had won in 1999, 2001, and 2004. The article misstated the class year of Chris Morse, the leader of Setec. He graduated from MIT with a PhD in 1998, not 1982 (this mistake was introduced during editing). He was a professor at Tufts in 2004, the last year Setec won Mystery Hunt, but is now a teacher at St. Paul's School in Concord, New Hampshire. About 40 teams, not 18, participated in Mystery Hunt 2016.

Dean to leave MIT to start new school

Ortiz's vision for non-profit school includes 'no majors, no lectures'

Ortiz, from Page 1

Ortiz has served as dean for graduate education since 2010. The purview of her office includes various diversity initiatives, the International Students Office, and Graduate Student Council staff.

"An enthusiastic and strategic champion for innovations in graduate programming, student success, academic excellence, and diversity and inclusion, Christine has helped build a graduate student community renowned for its talent, curiosity, and commitment to making the world a better place," Chancellor Barnhart wrote.

"She championed increases in funding for fellowships and recruitment and retention programs," Barnhart said of Ortiz. "[She helped] increase MIT's underrepresented minority graduate student population by 30% since 2010."

Ortiz has also worked to strengthen support services for graduate students and championed programs for stress relief, cultural acclimation, and child care.

"A particular highlight of my time as dean was partnering with the Graduate Student Council, an exemplar organization of student governance, collegiality, and effective advocacy," Ortiz said in a press release.

"Leading the ODGE and the graduate student community has been a great honor," Ortiz said. "I am forever grateful for the dedication and expertise of the ODGE, ISO, and GSC staff, as well as staff and faculty partners across the Institute, who have been incredible colleagues, thinking partners, and friends."

PORTRAITS OF RESILIENCE

Sally Lee

Editor's Note: Portraits of Resilience is a photography and narrative series by Prof. Daniel Jackson. Each installment consists of a portrait and a story, told in the subject's own words, of how they found resilience and meaning in their life.

I came from a troubled home. We were comfortable, and there was love, but there was a lot of uncertainty. It all looked good. The hedges were trimmed, the car was in the garage. But there just wasn't a lot of unconditional love. There was never just buying you a new dress because you're you. You had to give a lot of love to get any in return.

I was depressed during college, on and off. In my freshman year, I was in a relationship and it ended abruptly and I went to the therapist there. And he said: are you pregnant? And I said no, and he said well then, you're fine. And that was the end of that. Somehow I pulled myself out of that depression. I had really good friends. I fell in love with art, and I had teachers who told me: you know, you can probably do this with your life. And that helped.

I lost the hearing in my left ear at 24 and started suffering from tinnitus, which I still have, all the time. I became very sick, and after exploratory surgery, the doctors said there was nothing they could do. I was living with friends in Watertown, going to school for graphic design. I got really sick. I moved back to my parents house, and the depression was far worse. I asked them if I could go to art school in New York, to just paint and draw. I had some money from my grandmother, and I moved down there for a year. And then the money ran out, and now I was getting more and more depressed. So I moved home, back to my parents house. Now my parents were worried about me.

I eventually started to get help and was on the road to recovery. I had many issues to deal with, so I dealt with them one at a time. I was still depressed but I didn't understand it as an illness. I thought it was my fault and that I needed an attitude adjustment. I eventually got a job and moved out on my own.

And then my mum got sick with a tumor. She got diagnosed in January and she died that August. And my dad had already had a stroke. I was the child closest to home, so I had to look after them. As much as I loved my parents, their problems were more than I could handle. I just lost it.

I got more and more depressed. I couldn't sleep, I couldn't eat, I lost 20 pounds. I didn't know what was wrong with me. My friend Sue said I'm a little worried about you. Finally her husband called me one night, well they both did, and they said we're worried about you. They said we think you're going down.

I said I'm going to call the psychiatrist on call at MIT. I go see her and I say I'm really not OK, and I think I need to check into a hospital. So they got a bed for me that afternoon. I stayed four days but the medication wasn't right. Six weeks later I went in again, and they nailed it. This little hippie therapist said: Sally, you know normal people are here — he had his hand up by his eye — and you're here — and the other hand like down by his chest — and this is all we're doing, and he lifted that hand up to the other hand. And I said: that's it? And he said: that's it. I knew I was going to be okay, and I never looked back.

I had basically suffered from depression all my life, and this was the first time I didn't have to battle with my brain. I kept thinking I wish I had done this 20 years ago. I wouldn't have had to suffer so long.

Now I'm just on Effexor, which is like a miracle drug for me. There is so much misinformation. All the fears that you go in there with, that you're not going to feel anything, going numb. But really all it does is even out all that sorrow.

People who don't have depression have no idea what the depressed person is struggling with. It's like the person sitting there in the wheelchair and the thing they would like to do more than anything else on Planet Earth is to get up and walk up those stairs, but they can't do it. And the person who's walking up those stairs just says: get up! Just get up and walk up the stairs! What's the matter with you?

I'm glad that I survived so I can maybe help someone else with it. Now I'm able to enjoy all the good things life has to offer. My life isn't perfect but it is pretty great.

I wouldn't wish this on anybody. Nobody should suffer that long. I didn't feel the obvious answer was to go to a doctor. That may have been obvious to every single person around me, but not one person ever said that. I was surrounded by people saying you just need to not take things so personally. That just went on for way, way too long.

I'm glad I lived, you know, because it was pretty dicey for a little while. I am 53 now, and my troubles are behind me. Back then, I had a lot of rage and anger. I used to carry all that with me and I just don't carry it anymore. I said to my therapist: is this how normal people feel every day? And she said yes. I said wow, I had no idea.

COURTESY OF DANIEL JACKSON

Sally Lee is an administrative assistant in the Computer Science and Artificial Intelligence Laboratory.

This project is supported by the Undergraduate Association's Committee on Student Support and Wellness, chaired by Tamar Weseley '17 and Alice Zielinski '16. To participate in the project, or to learn more, contact ResilienceProject@mit.edu.

There are many ways to find help. Members of the MIT community can access support resources at together.mit.edu.

ARTS ARTS ARTS

That Dragon, Cancer, from Page 6

good use of sound design. Much of the story is delivered through speaking, and whether it's an inner monologue, a voice-over, or a conversation, the dialogue consistently feels genuine, because it is. When you hear the family talking about Joel, you're hearing an actual conversation that the developers recorded themselves having with their children. The game plays with spoken words, making them abstract and surreal to fit with the scene. The frequent use of spoken word and monologues usually works quite well, but sometimes it feels like the game is just using a monologue to tell me how to feel, rather than making me feel something. I also find the game's orchestral soundtrack to be a bit much, occasionally forcing or reinforcing emotional beats that don't need musical cues to evoke feeling.

The game's controls are simple. This isn't in itself a bad thing, but in the context of *That Dragon, Cancer*, my immersion often felt inhibited by the lack of agency the game allows. The controls consist of moving the mouse around and clicking, which is sometimes enough to provide a sense of agency while delivering the story, but at other times, the game felt like a cart on tracks that just asked me to click before feeding me the next segment.

And part of the game's purpose is to give the player a sense of helplessness. The Greens want you to feel what it's like to have a sense of moral responsibility, and a set of tasks you can perform, but be completely unable to comfort or save Joel. When it achieved this, I felt panicked and horrified. I felt morally culpable for not being able to help what I knew was a fake representation of a child. But sometimes, I was more frustrated with the controls for not doing what I was trying to do than with myself for failing.

There is also an occasional sense of information overload. One segment of the game was filled with cards bearing messages from Kickstarter backers, talking about their own losses. I wanted to honor these people's stories by reading them, but at the same time it felt misplaced, a jarring break from the narrative arc I was trying to follow. At other times, conversations in the background go on for too long, forcing me to decide whether to stand idle and just listen, or continue with the game. This sense of content overload may have been an intentional choice to overwhelm the player, but I felt like it just harmed the overall game experience.

NUMINOUS GAMES

Joel giggles and feeds a duck in a scene at the start of *That Dragon, Cancer*.

That Dragon, Cancer confronts the player with intensely uncomfortable and universal questions and truths, and this is where the game really shines. The Greens are devout Christians, and the game doesn't shy away from religious themes (not that it forces ideas about faith on the player). At one point, Ryan confronts his faith and his wife's certainty that Joel will be healed, asking, "how could the creator of all that is and ever was care about my son?" One doesn't have to be religious to understand the fear of cosmic insignificance, and part of what is so effective about the game is that while its story may be specific, anybody can identify with what these people feel. It affirms that the human condition is universal.

That Dragon, Cancer, in its final form, is a tribute to Joel's life. A life that was never lived. A life too short to have gained meaning or purpose, yet too long to be devoid of substance. And that accomplishment, in itself, is beautiful. The game is a compelling, unforgettable step forward in a fascinating direction that small independent games have been taking, of exploring storytelling through gameplay. It certainly could go further in embracing interactivity, to increase the sense of immersion and agency and strengthen the emotional connection it creates. But when the game is at its height, *That Dragon, Cancer* achieves gloriously, delivering emotional, interactive storytelling on the level of Telltale's *The Walking Dead* or *Gone Home*. The brutal realness and emotional candor that the developers poured into the game is constantly evident and incredibly admirable. This is a game worth experiencing.

Institute Double Take

By Skyler Adams
STAFF PHOTOGRAPHER

Elena Byun '17 spins a dragon staff in an MIT spinning club event during a winter storm.

Aperture: ƒ/6.4
Exposure Time: 1/250 sec.
Sensitivity: ISO 4000
Effective Focal Length: 38 mm

Minsky, from Page 1

produced theories on how to endow machines with intelligence.

Minsky, in 1959, co-founded the MIT Artificial Intelligence Project (later the Artificial Intelligence Laboratory) with his colleague John McCarthy, who is credited with coining the term "artificial intelligence."

Beyond its artificial intelligence charter, however, the lab would have a profound impact on the modern computing industry, helping to impassion a culture of computer and software design. It planted the seed for the idea that digital information should be shared freely, a notion that would shape the open-source software movement, and it was a part of the original ARPAnet, the forerunner to the Internet.

Minsky's scientific accomplishments spanned a variety of disciplines. He designed and built some of the first visual scanners and mechanical hands with tactile sensors, advances that influenced modern robotics. In 1951 he built the first randomly wired neural network learning machine, which he called Snarc. And in 1956, while at Harvard, he invented and built the first confocal scanning microscope, an optical instrument with superior resolution and image quality still in wide use in the biological sciences.

His own intellect was wide-ranging and his interests were eclectic. While earning a degree in mathematics at Harvard he also studied music, and as an accomplished pianist, he would later delight in sitting down at one and improvising complex baroque fugues.

Minsky was lavished with many honors, notably, in 1970, the Turing Award, computer science's highest prize.

He went on to collaborate, in the early '70s, with Seymour Papert, the renowned educator and computer scientist, on a theory they called "The Society of Mind," which combined insights from developmental child psychology and artificial intelligence research.

Minsky's book "The Society of Mind," a seminal work published in 1985, proposed "that intelligence is not the product of any singular mechanism but comes from the managed interaction of a diverse variety of resourceful agents," as he wrote on his website.

Underlying that hypothesis was his and Papert's belief that there is no real difference between humans and machines. Humans, they maintained, are actually machines of a kind whose brains are made up of many semiautonomous but unintelligent "agents." And different tasks, they said, "require fundamentally different mechanisms."

Their theory revolutionized thinking about how the brain works and how people learn.

"Marvin was one of the people who defined what computing and computing research is all about," Kay said. "There were four or five supremely talented characters from back then who were early and comprehensive and put their personality and stamp on the field, and Marvin was among them."

Marvin Lee Minsky was born on Aug. 9, 1927, in New York City. He was the precocious son of Dr. Henry Minsky, an eye surgeon who was chief of ophthalmology at Mount Sinai Hospital, and Fannie Reiser, a social activist and Zionist.

Fascinated by electronics and science, the young Minsky attended the Ethical Culture School in Manhattan, a progressive private school from which J. Robert Oppenheimer, who oversaw the creation of the first atomic bomb, had graduated. (Minsky later attended the affiliated Fieldston School in Riverdale.) He went on to attend the Bronx High School of Science and later Phillips Academy in Andover, Massachusetts.

After a stint in the Navy during World War II, he studied mathematics at Harvard and received a Ph.D. in math from Princeton, where he met John McCarthy, a fellow graduate student.

Intellectually restless throughout his life, Minsky sought to move on from mathematics once he had earned his doctorate. After ruling out genetics as interesting but not profound, and physics as mildly enticing, he chose to focus on intelligence itself.

"The problem of intelligence seemed hopelessly profound," he told The New Yorker magazine when it profiled him in 1981. "I can't remember considering anything else worth doing."

To further those studies he reunited with McCarthy, who had been awarded a fellowship to MIT in 1956. Minsky, who had been at Harvard by then, arrived at MIT in 1958, joining the staff at its Lincoln Laboratory. A year later, he and McCarthy founded MIT's AI Project. (McCarthy left for Stanford in 1962.)

Minsky's courses at MIT — he insisted on holding them in the evenings — became a magnet for several generations of graduate students, many of whom went on to become computer science superstars themselves.

Among them were Ray Kurzweil, the inventor and futurist; Gerald Sussman, a prominent AI researcher and professor of electrical engineering at MIT; and Patrick Winston, who went on to run the AI Lab after Minsky stepped aside.

Another of his students, Danny Hillis, an inventor and entrepreneur, co-founded Thinking Machines, a supercomputer maker in the early 1990s.

Hillis said he had so been taken by Minsky's intellect and charisma that he found a way to insinuate himself into the AI Lab and get a job there. He ended up living in the Minsky family basement in Brookline, Massachusetts.

"Marvin taught me how to think," Hillis said in an interview. "He had a style and a playful curiosity that was a huge influence on me. He always challenged you to question the status quo. He loved it when you argued with him."

Minsky's prominence extended well beyond MIT. While preparing to make the 1968 science-fiction epic "2001: A Space Odyssey," director Stanley Kubrick visited him seeking to learn about the state of computer graphics and whether Minsky believed it would be plausible for computers to be able to speak articulately by 2001.

Minsky is survived by his wife, Gloria Rudisch, a physician; two daughters, Margaret and Juliana Minsky; a son, Henry; a sister, Ruth Amster; and four grandchildren.

"In some ways, he treated his children like his students," Hillis recalled. "They called him Marvin, and he challenged them and engaged them just as he did with his students."

In 1989, Minsky joined MIT's fledgling Media Lab. "He was an icon who attracted the best people," said Nicholas Negroponte, the Media Lab's founder and former director.

For Kay, Minsky's legacy was his insatiable curiosity. "He used to say, 'You don't really understand something if you only understand it one way,'" Kay said. "He never thought he had anything completely done."

Pro football and a math PhD: Juggling two worlds

The Tech sits down with NFL offensive lineman John Urschel, who has started at MIT

Ray Wang
ASSOCIATE NEWS EDITOR

MIT students tend to have a lot on their plates — they might be juggling a varsity sport, a few clubs, and academics. But John Urschel has reached a different height — after finishing his second season in the NFL this month, he's now working on a PhD in mathematics at MIT.

Urschel graduated with a master's in mathematics from Penn State in 2013, and he was drafted by the Baltimore Ravens in 2014. An offensive lineman, his job is to guard the quarterback from being sacked, and he often goes toe-to-toe with the biggest guys in the pro league. Although he loves the physicality of the sport, which is what keeps him coming back for more, football's not a career for him — Urschel also wants to be respected as a mathematician. Fun fact: he's also an avid chess player.

The Tech caught up with Urschel at his desk in the newly-renovated Building 2, and got his thoughts on studying math at MIT this offseason.

The Tech: Why did you decide to come to MIT? Why Cambridge?

Urschel: MIT is really awesome ... it seemed like a good fit. I do love Cambridge — my dad, when I was a kid, he worked at Beth Israel Hospital. I always thought Boston was a great place, and he showed me around MIT, showed me around Harvard.

I've always had great memories from when I was a kid, and I looked at a lot of the professors here, and a lot of them do things I really like, so I thought it was a good fit.

The Tech: What are your research interests? Do you consider yourself more of an applied or pure math person?

Urschel: Most people put me more in the applied, and ... I don't really separate the two, I have interests in both.

I've done research in multigrid methods — so, like, numerical PDEs. I've done research in spectral graph theory. One of my first papers was in classical mechanics — celestial mechanics — and I'm currently doing some stuff related to convex polytopes.

Machine learning is more my applied side — but there are also very theoretical aspects to this, like proving worst-case complexity bounds ... Some of the newer things I'm doing on convex polytopes are more the theoretical side.

The Tech: Have you ever felt a stigma associated with you as a mathematician or a football player?

Urschel: I feel like, sometimes, the concept of math genius in mainstream sports is overblown, overdone. So, actual math people get a little hardened to this.

Mainstream media deems someone a math genius just because they did this or did that. I'd like getting a fair shot at things, like don't judge me based on these articles or what people are saying about me — judge me by meeting me, talking to me, reading my work.

The Tech: And on the other side?

Urschel: If you can play ball, you can play ball. That's it.

The Tech: How are you able to juggle a professional sport and a career in mathematics.

Urschel: I love all the stuff I do. Because I love the things I do, I like doing them all day, and somehow I find time to do math, do football, play some chess sometimes, and sleep. So, lots of hours in the day.

The Tech: Chess?

Urschel: I'm a big chess fan, but not good by good people standards ... I've done one tournament, I've got a rating of 1600.

The Tech: How do you compare the competitiveness of the NFL to the competitiveness of math?

Urschel: My competitiveness in both is a unified competitiveness. Just as I am competitive on the football field, I want to win, I want to beat the person next to me ... It's the same thing in math. I'm very competitive, I want to be successful, but now, instead of trying to beat up defensive lineman, I'm trying to beat up math problems. This is competitive 'me' against the unknown — against things I'm trying to solve. These are the things that are in the way.

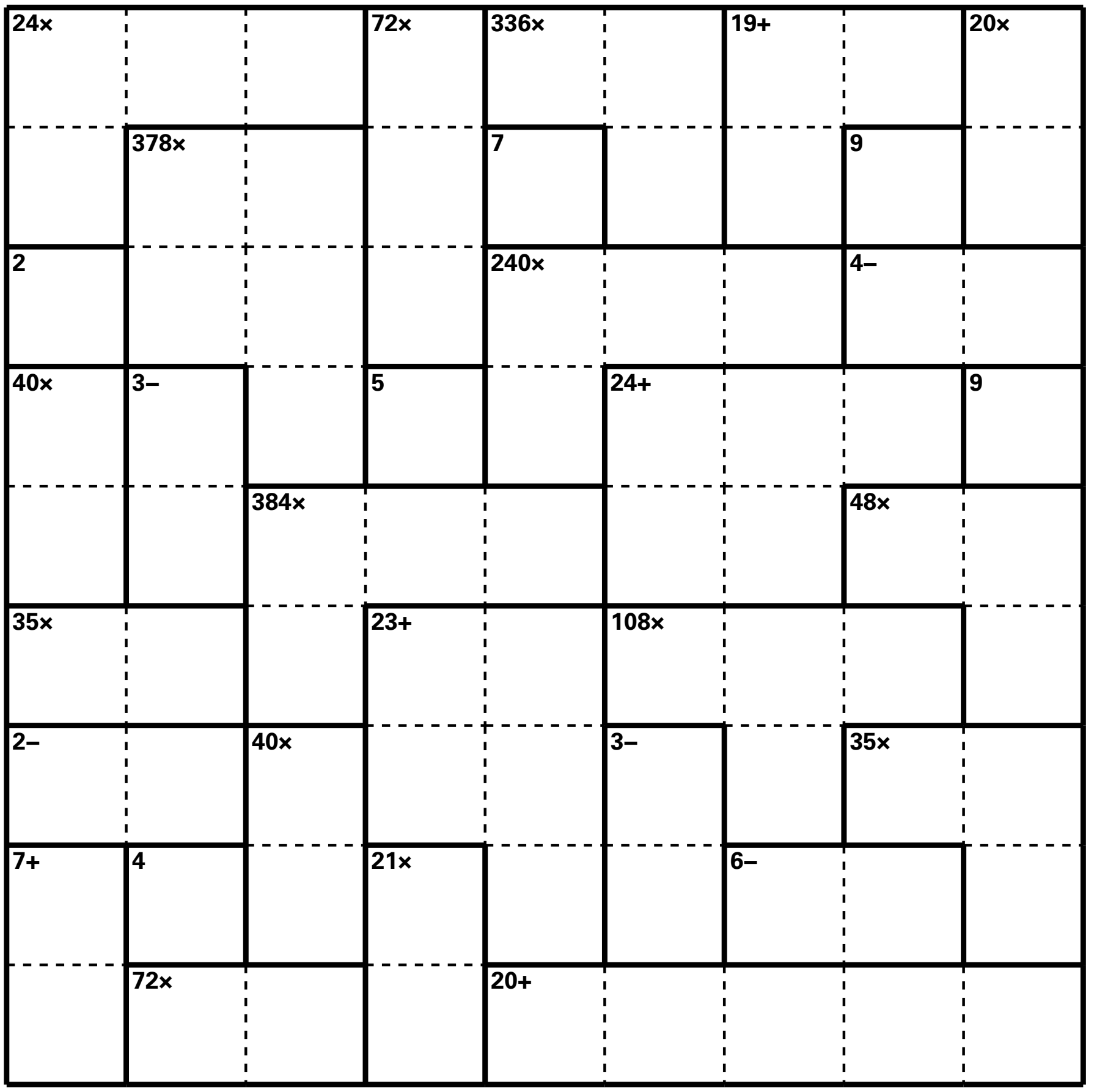
The Tech: What are your views on contributing to the football world after your playing career is over, perhaps coaching down the road?

Urschel: I want people to look back at me as a football player and say 'he was a tough player, he played the game right.' In terms of math, I want them to say he proved good results, he helped push math forward at least some tiny bit.

No coaching, though. I've seen what it's like ... the amount of time you put in, the amount of sacrifice. When I'm married, when I have kids, I intend to be a family man, be around, watch my kids grow up. It's very tough as a coach.

Registration Techdoku

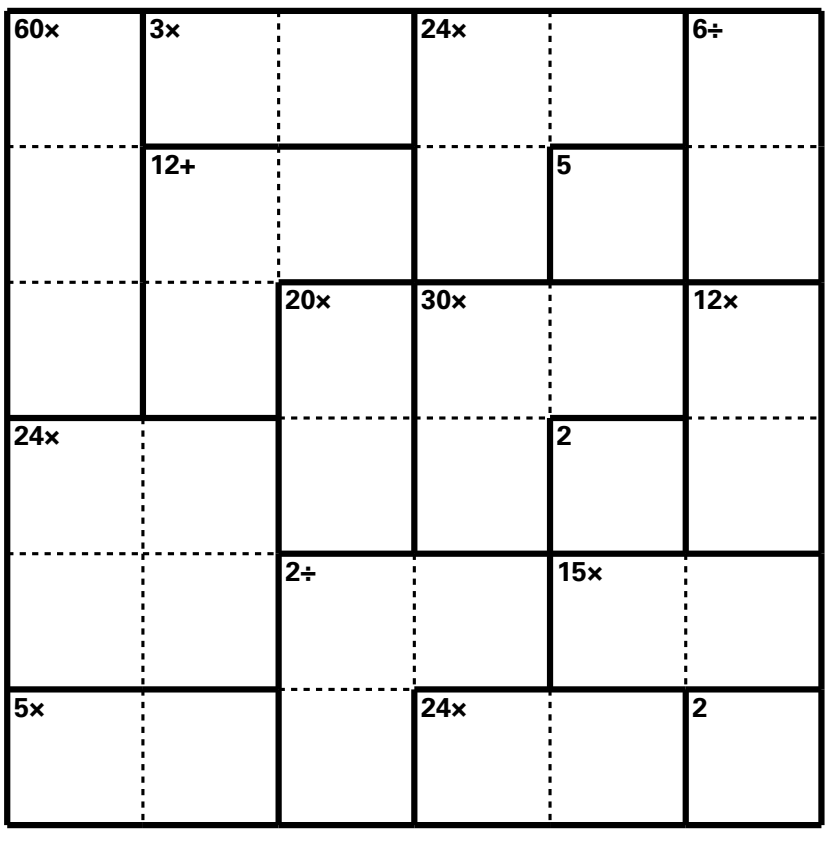
Solution, page 10



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–9. Follow the mathematical operations for each box.

Add Date Techdoku

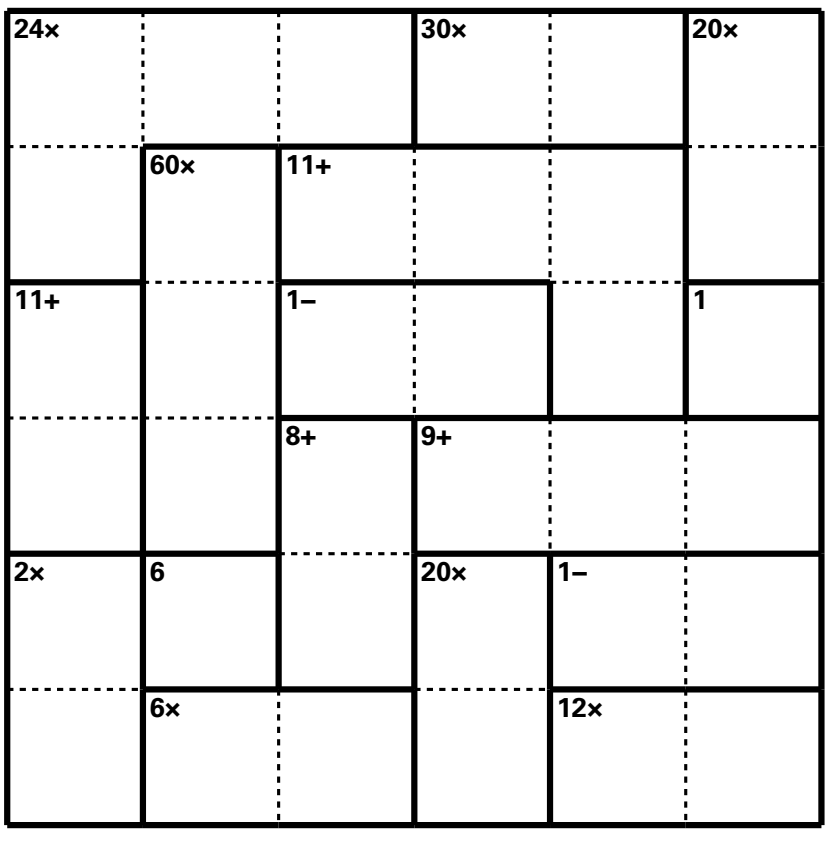
Solution, page 10



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

Drop Date Techdoku

Solution, page 10



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

FUNFUNFUNF

With no Met, where will the boxes go?

DormCon president seeks storage prices similar to Metropolitan's

Storage, from Page 1

ris '17 said in an email to a Simmons mailing list in early November. "But there have been a number of smaller issues with in-dorm storage over the past few years that have also contributed to MIT wanting to phase it out."

Changes to in-dorm storage would affect personal storage only, not storage which some dorms rent over the summer. Six undergraduate dorms currently supply summer storage; for students in the other dorms, Metropolitan Storage Warehouse is a popular choice.

However, there are upcoming plans to turn the Met Warehouse into a dorm, and the facility officially closes its doors on Saturday. Patrons have been asked to vacate their belongings by Jan. 29.

The issue of summer dorm storage was broached at a DormCon meeting on Oct. 22. At the time, concerns were raised that removing in-dorm storage and losing access to the Met would leave students with few remaining options.

Amanda Lee '18, Baker House representative, asked in the meeting: "Without in-dorm storage and the Metropolitan Warehouse closing, where are we supposed to store things?"

"We have stressed this in our meeting with Humphries [sic], but he said they're looking into this, yes," DormCon Vice President Caitlin Heber '16 said, according to meeting minutes.

"We should be aware though that this might be something they won't compromise on," she said.

More recently, on Jan. 21, DormCon President Yonadav Shavit '16 said that "DSL intends to provide us with a default (opt-in) storage solution" on a thread on discussion.mit.edu.

He said further that "it's almost certain that it will not be free," but noted that "the plan has not yet been nailed down."

"Our target range would be close to the current prices for the Metropolitan Warehouse, i.e. ~$300 for the amount of stuff one could fit in a 5' by 7' room," he wrote. "But that is tentative and subject to change."

Shavit and Heber were expected to finalize details with administrators Wednesday.

Solution to Registration Techdoku

from page @@@

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

Solution to Add Date

from page @@@

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

Solution to Drop Date

from page @@@

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

Do you wish your sport was covered?

Hello, Athletes, look at the sports page, now back to you, now back to the sports page, now back to you. Sadly, your sport isn't there, but if you started writing for *The Tech*, it could be. Look down, back up, where are you? You're on the front page. Anything is possible when you write for *The Tech*.

sports@tech.mit.edu

SPORT SHORTS

Women's swimming and diving Falls lost to Williams College, 217-82.

Amanda Wu '16 claimed the 50 freestyle with a time of 24.45 for the Engineers' lone individual victory on the day.

Men's swimming and diving defeated Williams College, 217.5-85.5.

MIT came away victorious in 15 of 16 possible events on the day, with their lone loss coming in the 200 Backstroke.

Men's basketball came up short against Emerson, 66-56.

Lampros Tsontzos '16 led the Engineers with a career-high 24 points.

Squash extended its win streak to eight with 4-0 victory.

Winning 35 of 36 ladder positions the MIT squash team recorded victories over Boston University, Boston College, Northeastern University and Northwestern University at the MIT Round Robin this weekend.

Men's track and field captured Bowdoin Invitational II

Behind eight individual first places finishes, the MIT men's track and field team captured the Bowdoin Invitational II over the weekend inside the William Farley Field House.

—Souparno Ghosh

Junior clocks best NCAA time for 3000m, finishing at 9:41.34

Women's track and field secures victory at Bowdoin

Max Berkowitz
DAPER STAFF

Maryann Gong '17 registered a first place finish with a time of 9:41.34 in the 3000m, an NCAA record, which helped the Engineers to victory at the Bowdoin Invitational II on Jan. 22 inside the William Farley Field House.

The top ranked Engineers accumulated 203 points, which was ahead of Merrimack College (90), Tufts University (89), Bowdoin College (70), the University of Southern Maine (65), Connecticut College (34), the U.S. Coast Guard Academy (23), Keene State College (7), Plymouth State University (5), and UMaine Farmington (2).

Gong's time in the 3000m, 9:41.34, is 2.32 seconds ahead of Amy Regan of Stevens Institute of Technology, whose current best time is 9:43.66. Both Gong and Regan are the only two women who have registered times below ten minutes this season.

As a team, MIT notched seven individual first place finishes, the top three spots in the 5000m, the top two finishes in high jump and weight throw, and first, second, third, and fifth positions in pole vault.

Bailey Tregoning '19 led the way for MIT with a win in the 800m race with a time of 2:20.97, before teaming up with classmates Leandra Zimmermann '19, Megan Montgomery' 19, and Gong for first in the 4x800m relay in 9:41.94.

Individually, Montgomery went on to place first in the one-mile in 5:15.81 and fifth in the 1000m in 3:08.22, while classmate Bailee Margolis '19 crossed the finish line first in the 5000m in 18:46.55.

In the field events, Natalie Alper '17 was first in high jump with a height of 1.62m, 5-3 3/4", Cimran Virdi '16 was first in the pole vault with a height of 3.67m, 12-0 1/2", and Jackie Vahey '17 was first in the weight throw with a distance of 16.05m, 52-8".

The Engineers secured 19 qualifying times for the NCAA Division III New England Indoor Championships, 13 qualifiers for the ECAC Division III Championships and five qualifying times for the New England Intercollegiate Amateur Athletic Association (NEICAAA) Indoor Championships, all which are going to be held later in February.