

Tau Beta Pi Scandal!

Stop the presses!!!

Scandal has erupted in TBP this semester as the powerhouse Team Actives has now been disqualified from the semesterly team competition for breaking of university rules. As evidenced in this picture below, which was published in several locations, student involved in the polishing of the bent located on the side of the EECS building participated in an act that broke several university policies. These policies include but are not limited to engaging in non-appointment related university work by a university employee without proper authorization and neglecting to wear protective clothing and equipment to perform university-related work. These violations will be thoroughly investigated, and unless found innocent on all counts, the group in question will be immediately disqualified from the competition.



Strike The Earth: An Introduction to Dwarf Fortress

By Rob Goeddel

Nethack, The Dungeons of Moria...these were the games of my childhood. With extremely limited resources, intrepid souls hacked together incredibly detailed worlds, generating random dungeons and battles for my intrepid warrior (pictured as an '@') to hurl himself into. Moria took up the majority of time, following me around on a little floppy disk. It was based loosely off of D&D and Tolkien's "Lord of the Rings," with an adventuring starting in a village and delving deeper and deeper into the abandoned mines of Moria in a quest to slay the Balrog.

I was not very good at Moria. I saw the Balrog once in my several years of playing, and he killed me in seconds. Little me was distraught. Days of training and searching wasted! However, even after I moved on to bigger and better things (Command and Conquer!), Roguelikes, the class of ASCII art-based dungeon crawlers such of Moria and Nethack, held a special place in my heart. Over a decade later, the hankering to play such a game overtook me one fine, EECS 381-filled night. Staring at code is much like staring at a Roguelike. The characters almost seem to take other meanings. I dug up a floppy drive and my old Moria disk (still with me to this day), but it no longer ran, and I have been unable to find working source code. What a shame. In my efforts to locate the

Inside this issue:

<i>Strike The Earth: An Introduction to Dwarf Fortress (cont'd)</i>	2
<i>"MindSET in my mind": The Way Too Optimistic Delusions of a K-12 Chair</i>	3
<i>Bananananananananas</i>	4
<i>Scottish Highland Dance</i>	5
<i>Eight Tips for Having Fun (and Winning!) at Whirlyball</i>	6
<i>The Hunger Games</i>	7
<i>2012 Leaders and Honors Brunch</i>	7-8
<i>Haikus</i>	8
<i>5 Linux Protips</i>	9
<i>Puzzles</i>	10

Upcoming Events:

- Sequoia Place V—4/04
- Fun and Games Night—4/04
- New Initiatives 5—4/05
- Poker Tournament—4/05
- WhirlyBall—4/06
- Leslie Science & Nature Center—4/07
- Fluffy Bunny—4/07
- Tutoring every Wednesday and Sunday

More information online at
<http://tinyurl.com/7bjlppo>
Please sign up online.



But it will be fun. \diamond



A very small world generated for a game of Dwarf Fortress.



“MindSET in my mind”

The Way Too Optimistic Delusions of a K-12 Chair

By Carlos Pons Siepermann

I remember when I was standing in front of all MI-G last Fall: explaining that the reason I should be elected as K-12 Outreach Chair was because the kid inside of me composes more than half of my personality; hence, I could interact positively with all the children that we would bring for MindSET.

Although I consider the above statement to be entirely true, and I believe that everyone who has interacted the slightest bit with me can probably vouch for its veracity; something that maybe not everyone knows is that a key component of my motivation for what I do (that actually far surpasses the seemingly endless pools of energy and crazy I possess) is a truly heart-felt passion for teaching. I love explaining things and feeling that I am helping the people around me discover knowledge they did not conceive previously. It makes me feel that I am

actually having a positive effect that goes beyond myself and that I can transform the people and the world around me. This is why the MindSET program is in my sincere opinion the best initiative that Tau Beta Pi has ever had, I have become deeply attached to it, want to see it grow and become as famous in our Campus as the Career Fair or the BookSwap. Why? You may ask. Well, because it transcends beyond the necessities of our own students, it involves helping those who truly need us and those who have not received an opportunity to discover the amazing world of science and engineering.

All of this excessively long prelude and context (I apologize) leads me to what I consider the true point of this article, which is a vision I once had and I would like to share with you... You'll see, I was once thinking what our Outreach program should become, and a fantasy slipped into my mind: Imagine waking up a Saturday morning, rushing to North Campus and instead of finding our excessively green and alarmingly calm environment, discovering a place full of life. The parking lots crowded with yellow buses and lines of children being received by volunteers of all majors and years, not only Tau Bates, but engineers who just want to help the community and believe that a part of being in a great university is giving back to the community in which we live. Everyone has been talking about this day, since hundreds of Michigan Students are enlisted to receive kids from all grades and from most schools of the Ann Arbor and Ypsilanti area. You'll see, it's a big deal: the schools have been preparing their kids, because it has become a matter of prestige among them to have your students be the group that earned the most medals and recognition in the modules (clearly, the most objective measure available for the proficiency of science education in public schools at the time); the volunteers are enthusiastic, since they heard so many exciting and fun things about this event, it has been talked about across campus; and the high-school seniors are feeling jumpy, because being a MindSET champion in the final year is a challenging and demanding accomplishment, that few brilliant future engineers get to have and proudly mention in their college applications.

As the day proceeds, what is now known through the land as the great MindSET Science Fair begins and few people are busier in the whole state of Michigan than our K-12 Chairs of Tau Beta Pi. These dedicated pair host and lead the crowd, coordinating all the events and volunteers, and scouting every single building on North Campus; after all, they had to reserve every single room to host this overwhelming amount of people. Children are learning about bridges and boats, building little cars with mousetraps, making 15-layer liquid towers to measure the density of objects; volunteers are escorting the smaller ones; some teachers, parents and principals are present to supervise and provide feedback; and, of course, water bottle rockets are shooting like crazy in the center of the Diag.

Finally, the end of the day arrives and everybody is still calming down after the speed and the excitement; and as the chairs give their final remarks and congratulate everyone, especially those who won their modules, a feeling of accomplishment fills the souls of all present, as every hand in the vast crowd is raised to answer our traditional query “Who learned something today?”. ◇



The winning group for the Design & Marketing Module



Banananananananas

By Kyle Lady

Pop quiz: what is the most popular fruit consumed by Americans? While apple pie is often considered an American tradition, apples fall to a distant second (16.7 pounds/year) behind bananas (26.2 pounds/year), and for good reason. Bananas are highly nutritious and cheap. They are also available year-round at cheap prices. Chiquita, the world's largest banana producer, describes bananas as "quite possibly the world's perfect food". Of course they would. In fact, bananas are also perfect from a genetic viewpoint. Every single Cavendish banana, the variety we see in Meijer and Kroger, is an exact genetic clone of the original Cavendish. Modern banana farming techniques involve a process called "vegetative reproduction". A common method involves growing tissue cultures in a laboratory setting and then planting the results. We reap the benefits of this genetic uniformity every time we go to the store – bananas are consistent, available all the time, and very uniform in terms of physical characteristics.

However, this genetic homogeneity will be the Cavendish's downfall. In mid-2008, scientists in Sumatra and Malaysia reported that banana varieties ("cultivars") such as the Cavendish could be vulnerable to a fungus called *Fusarium oxysporum* ("Panama disease"). Panama disease causes Fusarium wilt disease in over one hundred species of plants. It does so by colonizing the water-conducting vessels (xylem) of the victim plants, eventually blocking and then breaking down these vessels. Affected plants will wilt, yellow, and eventually die. A new strain of Panama disease, called "tropical race four Panama disease", has already begun to attack Cavendish plants in south Asia.

In fact, this isn't the first time *Fusarium oxysporum* has wreaked havoc on the banana industry. Before the 1950s, the dominant form of banana was the Gros Michel ("Big Mike"). The Gros Michel is said to have been easier to transport and a sweeter-tasting cultivar than the Cavendish. However, as Panama disease spread across the plantations, more and more Big Mike plants fell victim. The banana producers, in a panic, began clearing land faster than ever as they flailed to maintain production levels. Eventually, facing colossal losses, they were forced to switch to the Cavendish cultivar, a little-known Chinese variety that was previously viewed as inferior to the Big Mike. However, the Cavendish did have one thing going for it – it was invulnerable to Panama disease. Banana producers made the switch, and the Cavendish thus became the "universal banana", shipped everywhere from Ann Arbor to Amsterdam.

What can you do in the face of this crisis? Well, to be less sensational, it's not much of a crisis yet.

Many scientists are working to peel our beloved Cavendish away from certain death, both from a traditional agricultural breeding standpoint, and from a high-tech genetic engineering approach.

"Well," you say to yourself,

"I'm not a bioengineer, and I know nothing about agriculture. What can I do now?" I posit that you should make something using bananas, and "savor the flavor", so to speak, and cherish the experience to reminisce about to your increasingly bored grandchildren. ◇





Scottish Highland Dance

By Sarah Clark

Hi TBP! Have you ever heard of Scottish Highland Dance? I'm sure a lot of you are asking, "That's like River dance, right?" Wrong! Not that Irish dancing isn't cool and all in its own right, but it is so very different from Scottish Dance. Obvious differences are that Scottish dancers still have traditional costumes (i.e. KILTS!), much tamer hairdos, and use their arms when they dance.

One noteworthy point about Highland dance is that it's super athletic. Just imagine playing really complicated jump rope for 2-4 minutes straight since that's how long dancers are typically elevating non-stop. Then add on top of that a heavy 6-yard woolen kilt (for a large man it would be 9 yards—anyone heard of 'the whole nine yards' expression?!). Dancing used to be a men-only activity, a way that Highland and eventually British soldiers kept in shape, but has since evolved into a competitive sport with competitions all over the world.

It's also a way of preserving history. Each dance tells a story, although unfortunately, some of those stories have been lost in time. Even the positions have significance. The hands for instance, are shaped like antlers, and when the arms are raised, as in the Highland Fling, it is said to resemble an elk. The Gillie Callum (aka Sword Dance) is performed over crossed broadswords or alternatively a sword and its sheath. This was supposedly performed on the eve of battle to predict the battle's outcome—you'd want a good dancer who never even so much as lightly touched the sword, indicating many or important casualties, nor ever completely hit the sword entirely, indicating a defeat. Nowadays, a dancer just wants to avoid the sword so they don't get disqualified, or worse, injured!



2011 Michigan Renaissance Festival performance with Flint Scottish Pipe Band

Anyway, why am I even bringing this up? No one at UM has heard of or even seen Highland dance, except maybe if they watched the musical theatre department's attempt at Highland dancing in their performance of Brigadoon last year (amazing production, just the dancing was probably more amusing than intended), so why even care? Well, that's because this April, this long forgotten style of dance is making a scene on campus.

Along with ballroom, classical Indian, and Irish dancers, my home studio, the Walton School of Highland Dance from Birmingham, Michigan will be performing at the Dosh Benefit Concert at 7pm April 7th at the Mendelssohn Theatre. Tickets are \$5 for students and \$10 for adults, with proceeds benefiting underprivileged medical students in India with the long-term goal of improving existing health care conditions in rural India. Just take a look at www.dance4dosh.org.

The following weekend, those of you volunteering at Relay for Life will be sure to spot me performing on stage, too! I haven't heard what time my studio and I will be performing yet, but it will likely be between 10:45am and 3:30pm on April 14th.

These are both great causes, so I'm encouraging all of you to come and support! You might even learn something new about Highland dance (that I didn't already write about)! ◇



Eight Tips for Having Fun (and Winning!) at Whirlyball

By Kyle Lady

Contributing authors: Scott Wolchok and Jeff Rosen

Hey TBP! My calendar tells me that whirlyball is coming up this Friday! In case you didn't know: Whirlyball is awesome. It's like bumper cars and lacrosse and basketball and awesome, all mixed together.



0. You cannot have fun at Whirlyball if you are not there. Show up!
1. It's too hard to pick up the ball over the front of your car. Instead, pull up with the ball on your side and use a scooping motion to get the ball into your racket.
2. Steering: I like to think of the car as a tricycle: one drive wheel in front, turned by the crank, and two unpowered wheels connected by an axle in the back. The crank is geared 2:1: two turns of the crank will cause the drive wheel to make a complete circle, and one turn will put you in reverse. If the crank is between your knees, you're either going forward or backward. If it's at the 12 o'clock position, you're turning left or right. If you get stuck, don't just spin the crank in circles; carefully move it into reverse and back up.
3. Stopping: take your foot off the gas and give the crank a 1/4 to 1/2 turn. You'll skid stop.
4. You can drive backwards just as fast as you can drive forwards. This is great fun, will confuse your enemies, and you can spin around to avoid a block by smoothly turning the crank while you're moving.
5. To shoot and pass effectively, you need to either be very gentle and lob the ball without moving your wrist (mostly passing), or still be fairly gentle and snap your wrist forward at the end of your swing so that the ball travels to the tip of the racket and then flies straight off on the snap. Make sure the ball doesn't get stuck at the bottom end of the racket. It will either just stay in the racket when you swing, or it'll come loose halfway through the throw, and it'll go low.
6. Don't double-team the ball carrier! He'll just pass it over you to the guy you left open. Don't drive away from him either, because he'll just drive right up to the net. Have exactly one person block him and make him pass. This goes the other way, too: if you're not getting blocked, just drive all the way to the net.
7. Don't play a disproportionate amount of games. Everyone will hate you and, I, at least, will shun you and will refuse to pass you the ball. And that's **not** fun.

Seriously. You should go to Whirlyball. Just do it. ♦



The Hunger Games

By Megan Egbert

I spent last Saturday night in the slightly sweaty, and far too caffeinated presence of about two-hundred pre-pubescent teens. The Hunger Gaming mob, though quite subdued compared to the Twihards and their rhinestone wearing mothers, hit theaters nationwide with a vengeance last weekend. With the third largest opening weekend box office numbers ever, and the only non-sequel or summer opening, the film had quite the potential to disappoint many a reader. Luckily Suzanne Collins' characters translated beautifully from page to screen.

According to Rotten Tomatoes, the dramatic violence and raw emotion portrayed in the film brought the movie to the top of the box office, but I'd cite the twisted love triangle and subtle political undertones. Katniss Everdeen, is as equally beautiful as she is deadly, and while fighting for survival she finds herself the object of affection, twice. The ridiculously charming and handsome Gale Hawthorne is left at home to pine for her and care for her family, while the seemingly defeated, and ever unpredictable Peeta Mellark fights to the death by her side. In the first installment of the trilogy, the triangle is merely drawn and will continue to play out in the subsequent films, and I'd hate to unveil the victor of Katniss' heart to the illiterate. And like many novels before, the lovers provide a nice alibi for the undeniable political undertones of communism, 'big brother,' government control and warfare. The books are a quick and unchallenging read, but each presents a guaranteed four-hour distraction from the test you should be studying for. If four-hours (or more likely, twelve, as it's hard to resist the sequels) is too much to sacrifice, I highly recommend the film ... but only show-times after the bedtimes of most middle-schoolers. ◇

2012 Leaders and Honors Brunch

By Vicki Choe

The Leaders and Honors Brunch is a yearly event hosted by the College of Engineering, Tau Beta Pi, and the Epeians Engineering Leadership Society. This event honors CoE students who have made exceptional contributions in the areas of scholarship, research, leadership and service via university, departmental, and student organization scholarships. This year, 29 awards were presented to 85 students for a total of over \$200,000 in scholarship funds. Key speakers at the event include David C. Munson, Robert J. Vlasic Dean of Engineering; Jeanne Murabito, Executive Director for Student Affairs; Thomas Zurbuchen, Associate Dean for Entrepreneurship; James Holloway, Arthur F. Thurnau Professor and Associate Dean for Undergraduate Education. This event is made possible through the hard work of members of the Office of Student Affairs, Tau Beta Pi, and Epeians—namely Jennifer Wegner, CoE Student Affairs Assistant Director; Kelle Parsons, Student Affairs Graduate Intern; Vicki Choe and Kevin Joseph, TBP External Vice Presidents; and Auresa Thomas, Epeians Leadership Awards Chair. Elson Liu (Tau Bates, AZ A) provided a musical prelude to the proceedings.



The major responsibility of the External Vice Presidents of Tau Beta Pi was to recruit and form eight award committees comprised of one faculty member, one grad student, and one undergrad student per award. They then scheduled the award interview slots based on committee availability and, finally, the student nominees. The EVPs were also in charge of selecting the recipients of the First Year Student Awards. They coordinated the committees during interview week and worked with the Office of Student Affairs to set up and direct guests at the Leaders and Honors Brunch capstone event. Please see the follow page for a list of the Tau Bates awarded at the 2012 Honors Brunch.



2012 Leaders and Honors Brunch (cont'd)

Congratulations to all of the Tau Bates who received academic, leadership, and/or organization awards at this year's Student Leaders & Honor Brunch:

- Yvan Anders Boucher, Nuclear Engineering and Radiological Sciences—Distinguished Leadership Award
- Rebecca Frank, Computer Engineering—Distinguished Achievement Award
- Elizabeth Grobbel, Civil & Environmental Engineering—Henry Ford II Prize
- Michael J Hand, III, Electrical Engineering: Systems—Distinguished Leadership Award, Tom S. Rice TBP Award
- Steven Hoffenson, Mechanical Engineering—Distinguished Leadership Award, Richard F. and Eleanor A. Towner Prize for Distinguished Academic Achievement
- Daniel Kiefer, Aerospace Engineering—Distinguished Leadership Award
- Brendan Kochunas, Nuclear Engineering and Radiological Sciences—Richard F. and Eleanor A. Towner Prize for Distinguished Academic Achievement
- Abhishek Kumar, Aerospace Engineering—Richard F. and Eleanor A. Towner Prize for Distinguished Academic Achievement
- Joshua Lumley, Chemical Engineering—Distinguished Leadership Award, Distinguished Achievement Award
- Michele Mastria, Chemical Engineering—Tom S. Rice Tau Beta Pi Award
- Darin McLeskey, Civil & Environmental Engineering—Distinguished Achievement Award
- Paul Rigge, Electrical Engineering—Distinguished Achievement Award
- Aftin Ross, Biomedical Engineering—Marian Sarah Parker Graduate Prize, Richard F. and Eleanor A. Towner Prize for Distinguished Academic Achievement
- Shani Ross, Biomedical Engineering—Richard F. and Eleanor A. Towner Prize for Outstanding GSIs
- Nick Ruff, Computer Science Engineering—Cooley Writing Prize: Fiction Division
- Vivek Thanabal, Mechanical Engineering—Distinguished Achievement Award
- Patrick Theisen, Computer Science Engineering—Distinguished Achievement Award
- Yiqing (Shirley) Xu, Chemical Engineering—Cooley Writing Prize: Nonfiction Division ◇

Haikus

Rob Goeddel

Rob's Haiku Corner

End of semester
Two service hours to go
Write for Cornerstone!

Bunn Coffee Maker
Breaks at the dB Cafe.
Class attendance low.

Cub Scout Day is great!
Tons of future engineers.
My team wins egg drop.

Qualifications.
Graduate student's nightmare.
I hope I will pass.

Intramural Sports.
HKN goes all the way.
Loser Bracket Champs!

Why five-seven-five?
Seems pretty arbitrary.
History lesson.

Wikipedia.
Form of poetry explained.
Juxtaposition.

Today I learned that
Outside of Japan, haikus
mostly in English. ◇



5 Linux Protips

By Kyle Lady

Depending on your classes, you might not have to use Linux (or the OS X command line interface) all that much, but if you do, there are a bunch of little things you can do to make your life easier.

1. ssh aliases

Ever get tired of typing "ssh kylelady@login.engin.umich.edu"? You can make ssh shortcuts by modifying ~/.ssh/config and adding something like the following:

```
Host caen
```

```
HostName login.engin.umich.edu
```

```
User kylelady
```

Now you can just type "ssh caen" and you're connected in like a third of the time it would have taken.

2. Ctrl-a and Ctrl-e

Type Ctrl-a to go to the start of a command, and ctrl-e to jump to the end. No more holding down the arrow keys!

3. !!

If you're like me, you forget to type "sudo" in front of commands all the time. Now, you could hit Ctrl-a and then type "sudo ", but Linux was written by people who really like to save time. Your shell will insert your previous command where ever you put "!!":

```
$ vim /etc/network/interfaces
```

```
$ sudo !!
```

```
sudo vim /etc/network/interfaces
```

4. !\$

Yet another super-useful shell shortcut is !\$. This time, !\$ inserts the last "word" of the previous command where ever you type it:

```
$ mkdir ~/research/foo/bar/baz
```

```
$ cd !$
```

```
cd ~/research/foo/bar/baz
```

```
$ pwd
```

```
/home/kylelady/research/foo/bar/baz
```

```
$
```

5. Terminal colors

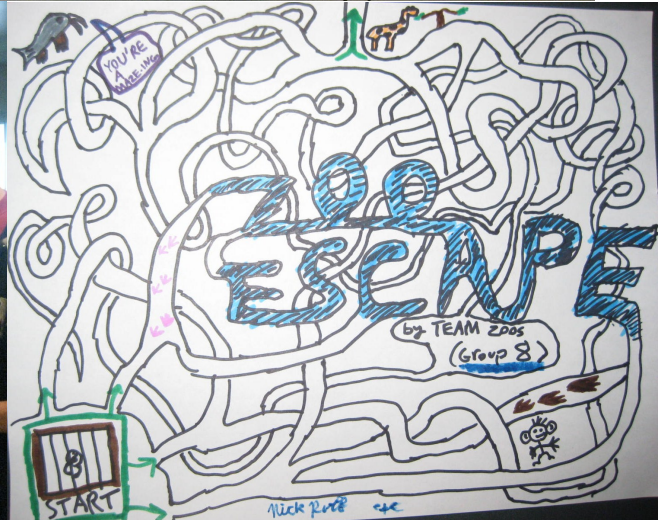
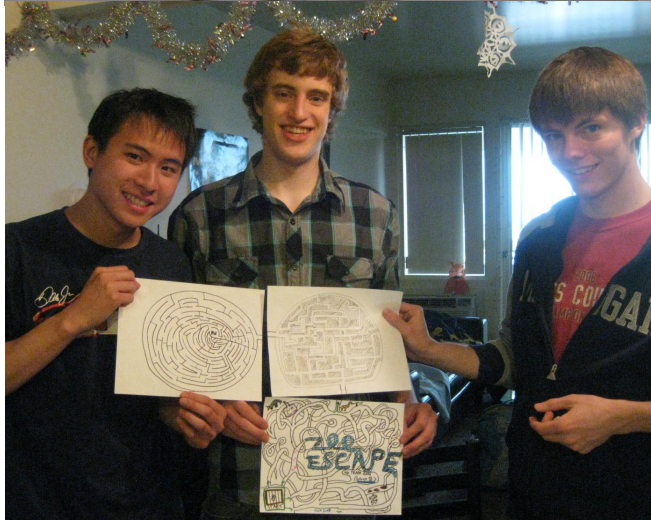
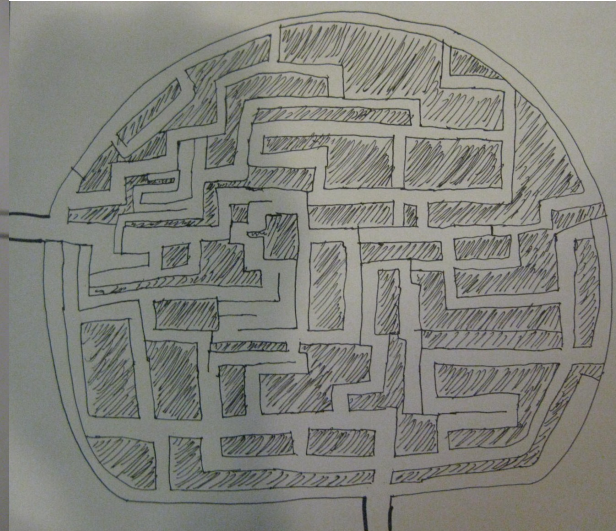
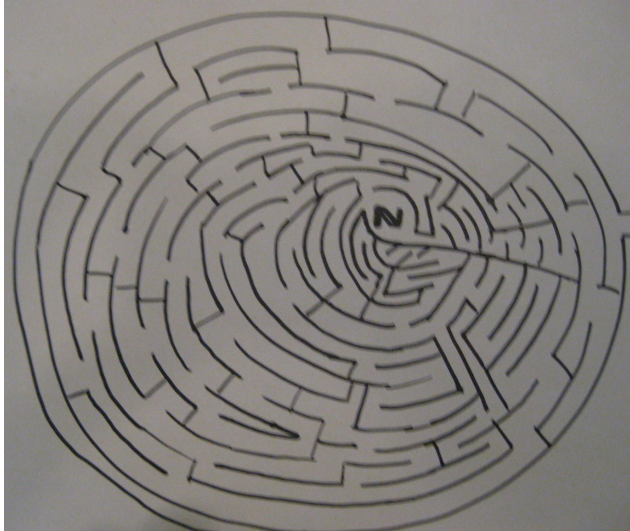
Usually, commands like "ls" use a nice color-coded display to indicate file statuses, like executable or directory. Sometimes, though, you find yourself on a system that prints everything in boring black (or green, if you're awesome like me). For example, my laptop shipped with OS X Lion configured to not use any colors in the terminal. This can be fixed by letting programs like ls know about your ability to display color through an environment variable. Just open up ~/.bash_profile and add the following line somewhere:

```
export CLICOLOR=cons25
```

You'll have to either run "source ~/.bash_profile" or close and re-open your existing terminal windows, but there ought to be a lot more color in your life now. ◇



Puzzles of the Week



Word Search Categories:

TBP Officers (6)

Little-Known North Campus Buildings (5)

Restaurants That Aren't On North Campus (9)

Mazes submitted by Team Zoos (Group 8)

Word Search submitted by Kyle Lady

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