SPIRIT Newsletter

February's Theme: Family Connection

Editorial By: Alka Harriger

The February issue of the SPIRIT newsletter acknowledges and celebrates the value of family connections. SPIRIT offers educational opportunities to high school teachers, guidance counselors, and high school students as a way to increase the knowledgebase of these groups regarding the exciting career opportunities for people with IT skills. These groups were selected because 1) They are among the larger groups that impact future career options pursued by our young people, and 2) The NSF-ITEST program supports programs for these groups. However, when the original research was done regarding the groups that impact career choices of our young people, another important group emerged….families.

All participants are selected through an unbiased process involving a committee of SPIRIT staff who review applications using computer-supported tools that allow them to view applicant responses to essay questions without knowing their names and schools. Nonetheless, several family connections materialized. As the SPIRIT team reviewed our experiences from the past two years related to these family connections, we believe they helped contribute to a stronger and more significant impact. This issue shares a few of these family connections with you:

- Friends and SPIRIT: Jane Nawrocki elucidates the story of a mother and daughter who have added significant value to SPIRIT in multiple ways.

- Family Ties: Jessica & Mikel Berger share other family ties that exist within the SPIRIT family, starting with their own family tie.

- Ask Alice: Jessica & Mikel Berger explain to readers how to choreograph a family of objects so they exhibit the same behavior simultaneously, much like what I have observed in some real families.

- Computer History: Melissa Weddle continues listing important dates related to computing history. She also continues to challenge and entertain readers with her riddles and jokes. From what I hear, very few readers have taken the challenge of sending her their answers to the riddles, so the chance of winning the secret prize she's giving away is pretty high right now.

If you are aware of other family connections, please forward them to us to share with readers in future issues. Also, remember that we have initiated the SPIRIT Essay Contest and are accepting entries until March 15. Right now, there are very few entries, so the chances of winning the prize (iPod nano) are pretty high. If you've worked with Alice and are a student in grades 6-12, consider submitting your entry online. (Use the 2010 Essay Contest link under the Students menu on the SPIRIT website.)

With best wishes,
Alka Harriger
For the SPIRIT team

Friends and SPIRIT By: Jane Nawrocki

Tammy Fisher, a Crisis Project and Change Manager for TheFishers5 and the President of Purdue's CIT IAB (Industrial Advisory Board) and formerly a manager with PricewaterhouseCoopers

"Work should be fun or it becomes a grind."

Jena Fisher, Freshman at Purdue University majoring in CNIT

We have all heard the expression "Friends in High Places." Traditionally, this phrase refers to "friends in high places" doing questionable favors for others who are normally "friends in low places." This is not the scenario described in this article, but this story certainly started with "friends in high places." Tammy Fisher, currently a Crisis Project and Change Manager for TheFishers5 and the President of Purdue's CIT IAB (Industrial Advisory Board) and formerly a manager with PricewaterhouseCoopers, and her daughter, Jena Fisher, a student at Purdue, are personal friends with Alka Harriger—the friend in high places at SPIRIT.

The summer of 2008 was Mrs. Fisher's first experience with SPIRIT. She led a panel session on Best Job Interviewing Skills, donated a variety of items to the student participants, and coordinated an evening meal activity for students, counselors and teachers. When asked to describe her most memorable or exciting experience while at SPIRIT, she replied "The smile on Alka's face (and the tear in her eye) when the first year participants applauded her dedication to the cause of young females. We all need people like Alka who are willing to give up so much to help so many others."

As the interview continued, the question "Have you encouraged others to participate in SPIRIT?" was asked. Tammy Fisher quickly replied "I recruit young females all of the time to become active in the cause of educating others about the needs for women in technology. My tag line is: men created high heels, they designed the size of public bathroom stalls, do you really want them to create the technology that supports the robotic PAP smear machine?!?!?"

Mrs. Fisher, who holds a BS degree in CIT from Purdue, an MBA from Murray State University, and an Advanced Project Management Certification from Stanford, was asked what she considers to be the most important thing a student should consider when selecting a career. Her response is priceless. "Do what interests your heart. You know what this is at an early age. When you first wake up every morning, what you do think of first and repeatedly? This is what you should do. Work should be fun or it becomes a grind. The trick is being honest with your true instincts and getting exposure to options that allow your heart and your career choices to collide. This is SPIRIT."

And this collision is exactly what happened to Jena Fisher (Tammy's daughter) during SPIRIT 2008. Jena freely admits that "SPIRIT changed my life completely and the course of my career goals in general. Before the SPIRIT program, I didn't want a career in computers--at all. To my knowledge the only computer jobs available involved sitting at a desk with your eyes hurting from staring at the screen. In 2008, when I was employed to take pictures of SPIRIT activities, I was sitting in a session when I heard the speaker say that she had studied Theatre in high school. And, I being a fellow Theatre lover, stopped what I was doing and really listened to the rest of her presentation. From that moment on I was completely changed to the idea of working in IT. Before SPIRIT I wanted to major in History or Political Science in college. After this collision of my true instincts and the exposure to more career options, I decided that I would look more at Technology. Well, I did and here I am at Purdue majoring in CIT (Computer and Information Technology)."

As part of Jena's exploration of technology and career choices, she returned to SPIRIT 2009 as a camp counselor. When asked "What was the most difficult thing about SPIRIT?", she replied "This is going to sound very odd but the most difficult thing was not completely knowing what the kids were doing with their Alice projects. During SPIRIT 2008 all I could do was wonder what they were doing. If they asked me a question, I couldn't answer them and this bugged me. The second year (2009) we had a prep course on the Alice software which helped tremendously. I was happy because I was now able to help out with student questions. However, since I didn't study up at night, the students surpassed my knowledge by mid-week. But I was still able to help them out and this was good." [Jena is being too modest. As this author recalls, Jena created a very involved and imaginative Alice world in between answering student questions and performing her numerous duties as camp counselor.]

When asked about future goals, Jena hopes to combine her CNIT major and her love of theatre. Upon graduation from Purdue, Jena would like to work with a major corporation where she can use her IT background. Then, after a few years, she would like to work in a community theatre running the lights. (Jena has a minor in technical theatre.)

Friends and SPIRIT (continued from page 2)

This author is particularly pleased that both Jena and Tammy Fisher do have friends in high places. Their stories speak volumes for the goals of SPIRIT and Alka's dedication to furthering the cause of young women in IT.

Note: Jena shared that she enjoys all kinds of music from opera to hard core rap. However, she adds that "I just can't stand country music." This author would like to suggest that for her country music education she needs to listen to: *Friends in High Places*—sung by George Jones and *Friends in Low Places*—sung by Garth Brooks.

Tammy Fisher (independent consultant) may be contacted at: thefishers5@earthlink.net
Jena Fisher may be contacted at: choir_nun09@hotmail.com

Family Ties By: Mikel and Jessica Berger

For those of you who have attended SPRIT, I think some of you would attest to forming some strong friendships, and while there, having to rely on each other in a way that is similar to how you rely on your family. Well, in the "spirit" of the February newsletter theme of "Family Ties," we thought you would be interested in reading about numerous actual family connections we have within the SPIRIT program.

Families that have participated in the SPIRIT program include:

Julie Briney and her daughter Laura… Julie is a business teacher at Gibson City-Melvin-Sibley High School in Gibson City, IL. She was among the teachers in our first year of SPIRIT (2008) and has done an excellent job incorporating Alice into her classroom. Her daughter, Laura, was a student camp attendee in 2009 and is currently a freshman at Mahomet-Seymour High School in Mahomet, Illinois.

Stephan Danckers and his daughters Annaliese and Emily... Stephan is a science teacher at Avon High School in Ohio. Stephan was in the SPIRIT class of 2009 and has created Alice worlds to help students understand motion and other physical science concepts. His daughters, Annaliese, a freshman, and Emily, a junior, were student camp attendees in 2009. The Danckers family is good friends of the Farnsley family, so yet another tie-in!

Lou Russell and Kelly Martin… Lou was one of our IT Business Panel speakers and owns her own consulting business. Kelly is a CGT major at Purdue and was a camp counselor in 2009.

Anushree Bag and her daughter Roshni… Anushree is a Senior Manager of Performance Improvements at Midwest ISO and ran sessions on the SmartGrid for the 2009 SPIRIT program. Her daughter, Roshni, is a freshman at Carmel High School and was a SPIRIT 2009 student camp attendee.

Janice Thomaz and her daughter Sarah… Janice was a speaker for the 2008 and 2009 SPIRIT counselor groups regarding CS academic advising. Her daughter, Sarah, attended the 2008 student camp and is a junior at West Lafayette High School.

Gail Farnsley and her daughters Sarah and Caleigh... Gail is a visiting professor in the Department of Computer and Information Technology (CIT) at Purdue. She is the former Vice President and Chief Information Officer for Cummins, Inc. based in Columbus, IN. When SPIRIT was initially proposed, Gail joined the SPIRIT team as an industry partner. Shortly after SPIRIT was funded by the NSF, Gail joined the CIT Department with support from Cummins, and she has been working on a new program in Technology and Society. At that point, she became a SPIRIT staff member, so she has been a part of the SPIRIT team since the beginning in two different roles. Her older daughter, Sarah, served as a camp counselor in 2008. She is now a dance student at Butler. Gail's younger daughter, Caleigh, attended the 2008 summer camp and is an upper-class student at West Lafayette High School in West Lafayette, Indiana.

Stephan Danckers explains a feature in Alice

"...she has been a part of the SPIRIT team since the beginning in two different roles"

Gail Farnsley leads a session on social networking

Family Ties (continued from page 3)

Brad Harriger leads session on computer-aided design (CAD)

Logan Harriger seated with the rest of the camp counselors at the Friday luncheon

Mikel & Jessica Berger and their son, Gunnar … Mikel is a software developer for DelMar IT in West Lafayette and Jessica is a domestic engineer who has taken a break from teaching high school science to stay home with their 21-month old son, Gunnar. Mikel and Jessica are two of the Alice instructors for SPIRIT and Jessica had just had Gunnar about 5 weeks before SPIRIT 2008, so Gunnar came along to camp quite a few days.

Alka Harriger, her husband, Brad, and her son, Logan… Alka is the Principal Investigator for the SPIRIT project and has been on faculty with the Computer and Information Technology department at Purdue since 1982. Alka is currently the Associate Department Head and is involved in every aspect of the SPIRIT program. Her husband, Brad, is currently the Director of the College of Technology's Manufacturing Center and a professor of Mechanical Engineering Technology at Purdue. In 2009, Brad offered SPIRIT participants a taste of automated manufacturing through hands-on sessions. He has also graciously opened his lab for us to see one of the really unique things they do in the summer – Guitar Camp! Students as well as adults visit the Purdue campus each summer to craft their very own customized, solid-body, electric guitars with the help of technology and some of the industry's leading guitar designers. Isn't technology great?! To top it all off, Brad and Alka's son, Logan, has been involved with SPIRIT as a camp counselor since the inception of the SPIRIT program. Logan is currently a sophomore at Indiana University studying three majors and a Spanish minor. He has plans to continue his education in grad school.

If you have a family tie in SPIRIT that we did not catch, please let us know!

Jokes and Riddles By: Melissa Weddle

"If you have a family tie in SPIRIT that we did not catch, please let us know!"

Here are the monthly riddles. As always, please submit responses to me at mweddle@purdue.edu. There are only a few more months before the end of the riddle-solving contest. Submit your answers now for a chance to win a really cool prize!!

1. You throw away the outside and cook the inside. Then you eat the outside and throw away the inside. What did you eat?

2. I have four legs but no tail. Usually I am heard only at night. What am I?

3. I give you a group of three. One is sitting down, and will never get up. The second eats as much as is given to him, yet is always hungry. The third goes away and never returns.

4. Two in a corner, 1 in a room, 0 in a house, but 1 in a shelter. What am I?

And this month we have a little extra space, so here are a couple jokes for your viewing pleasure…

Vicky was at a business conference. During a break, she decided to call home collect. Her six-year-old son picked up the phone and heard a stranger's voice say, "We have Vicky on the line. Will you accept the charges?" Frantic, the six-year-old dropped the receiver and came charging outside screaming, "Dad! They have Mom! And they want money!"

The economy is so bad that: Motel Six won't leave the light on anymore.

A nursery school driver was delivering a van full of kids home one day when a fire truck zoomed past. Sitting in the front seat of the truck was a Dalmatian dog. The children started discussing the dog's duties.
'They use him to keep crowds back,' said Tommy.
'No,' said Billy, 'he's just for good luck.'
Peter brought the argument to a close. 'They use the dogs, he said firmly, to find the fire hydrants….'

Ask Alice– A "Family" of Objects By: Jessica Berger

Dear Alice,

I have a world I have created that contains twenty cows. I want to have them all move together as a family of cows. Is there a better way to do this than to have a method for each cow. This is getting redundant and to make them do anything very complicated would make for many lines of code.

--Mooooonwalking in Minneapolis

Dear Mooooonwalking,

I know exactly what you are talking about. An army of cows can be impressive but it can become tiresome if you have a routine for the cows to perform simultaneously but have to have a line of code for each cow for each method. The best way to do this is to use a list.

First, make sure you have the objects in the world that are going to be part of this family of objects. Next, we must create a list. Under the "world" properties, click "create new variable." Name your list. In your case, I am going to use "Herd" and then select "Object." Also, make sure to check the box next to "make a list" and you should see a box pop up. In this box will be a button that says "new item." Click this for the number of objects (cows) you have in your family of objects. A few things of note:

I want to have <twenty cows> all move together as a family of cows. "

The numbering of items starts with "item 0" so for twenty cows you will need to add "item0" through "item 19," for example.
If you add too many items or not enough items, they can be added or deleted but it is much easier to plan it out before creating the item list so you do not have to deal with that. (Perhaps I will address this in a later article.)

To finalize the list, for each item you must select which object is associated with that list item number. For example, "item 0" will be "cow" and the "entire cow." Once all the items have been associated, click "Ok" and you will see your list appear in the properties of the world.

Now to animate the object family… Look below the editor window where you usually find things like "Do Together" and "Loops" and you will see a button called "For all together." Drag this into the editor window, select "expressions," and select the list (world.Herd, in this case) that you created. It should look something like this:

Click on "Obj item_from_herd" in this line and drag it into the "Do Nothing" line and a box containing methods for your herd will appear. Notice that the "special" methods for the cows do not appear but the common methods (move, turn, roll, etc.) will be there. Choose a method and press play. All your cows should act together at the same time. You can continue to use this same list for more methods to create your routine.

I hope you have an easier time choreographing your cows using lists for a family of objects acting together.

--Alice

Computer History By: Melissa Weddle

This month we are continuing our section on computer history. Last month we left off in 1975 (most you probably remember that, right??).

1978: Epson introduces the TX-80, which becomes the first successful dot matrix printer for personal computers.

1978: The first spam e-mail was sent by Gary Thuerk in 1978 an employee at Digital who was advertising the new DECSYSTEM-2020, 2020T, 2060, AND 2060T on ARPAnet.

1979: Robert Williams of Michigan became the first human to be killed by a robot at the Ford Motors company on January 25, 1979 resulting in a $10 million dollar lawsuit.

1979: Texas Instruments enters the computer market with the TI 99/4 personal computer that sells for $1,500.

1979: Atari introduces a coin-operated version of Asteroids.

1979: The programming language DoD-1 is officially changed to Ada.

1980: IBM hires Paul Allen and Bill Gates to create an operating system for a new PC. The pair buy the rights to a simple operating system manufactured by Seattle Computer Products and use it as a template. IBM allows the two to keep the marketing rights to the operating system, called DOS.

1980: The programming language FORTRAN 77 is created.

1981: Adam Osborne introduces the Osborne I, the first successful portable computer, which weighs 25 pounds.

1982: Disney releases the movie Tron on July 9, 1982, the first movie to use computer generated special effects.

1982: WordPerfect Corporation introduces WordPerfect 1.0 a word processing program that will become one of the computer markets most popular word processing program.

1982: Rich Skrenta a 15-year old high school student creates the first known computer virus known as The Elk Cloner.

1983: More than 10 million computers are in use in the United States.

1984: The 3.5-inch floppy diskette is introduced and later becomes an industry standard.

1985: Paul Brainard of Aldus Corporation introduces Pagemaker for the Macintosh, a program that lets users mix type and graphics on the same page. The combination of this software and the new Apple LaserWriter laser printer helps create the desktop publishing field.

1985: The Nintendo Entertainment System makes its debut.

1986: More than 30 million computers are in use in the United States.

1987: Microsoft purchases Forethought Incorporated. The company that developed the presentation software PowerPoint.

1988: About 45 million PCs are in use in the United States.

1988: Creative Labs introduces the SoundBlaster, a sound card for the PC that contains an 11-voice FM synthesizer with text-to-speech, digitized voice input / output, a MIDI port, a joystick port and bundled software.

1988: Morphing is first introduced in the movie Willow.

1989: Intel releases the 486DX processor, with more than 1 million transistors and multitasking capabilities.

1990: The first search engine Archie, written by Alan Emtage, Bill Heelan, and Mike Parker at McGill University in Montreal Canada is released on September 10, 1990

(courtesy of http://www.computerhope.com/history/)