Turning and Tossing

Engineering the Perfect Pancake

They were having just a little too much fun when the airborne pancake whizzed by, lost altitude and plummeted to the concrete floor of the Maintenance Shop. It was meant for Darren Huntley's plate, but fell too quickly and a little short, missing his feet only because he jumped back at just the right moment. No one seemed to mind, however, not even Huntley, Facilities mechanic. After all, it was a party.

In fact, it was the first annual Engineer-Sponsored Pancake Feed, or ESPF (pronounced espif), a celebration concocted by Facilities engineers, Mark Grootveld, Mark Nelson, Michael Vaclav and Troy Vareberg to recognize the successful completion of the division's end-of-year work. And whether it was their engineering skills or plain, unadulterated luck, the four batter-beating, flapjack-flipping, sausage-sizzling musketeers pulled it off in grand style, rivaling any Perkins for miles around.

The pancake shenanigans at the October 6 lunchtime event never let up. As hungry guests came to the serving line, they were challenged to catch their high-flying lunch with paper plates. Of course, they could always opt for pancake delivery — cakes piled atop a remote-control model car and driven to dining tables at warp speed.

And let's not forget ESPF's most innovative pancake. Vaclav delighted all with a golden version of everyone's favorite mouse, only to be derided by shouts of, "OK, Mike, get over here and flip your Mickey," from ESPF's less-artistic co-sponsors.

In spite of off-key attempts at the Mickey Mouse Club theme song, ESPF ended on a positive note with the arrival of two special guests, Director Tom Barton and Operations Director Rollie Struss. But VIP status aside, even they were reminded by Vaclav, "This isn't Burger King; you get it the way we serve it." ■

Pancake Mobile

This One's for You. Mark Grootveld directs an ESPF guest to prepare for pancake air express. Left to right: Troy Vareberg, Mike Vaclav, Grootveld and Mark Nelson.

Look Lively. If custodian Rickie Wheeler doesn't catch his cakes, he may have to clean them up, and it won't be off his plate.

INSIDER

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INSIDER

Newsletter for the Employees of Ames Laboratory ■ Volume 6, Number 9 ■ October 1995

Remembering Harley Wilhelm

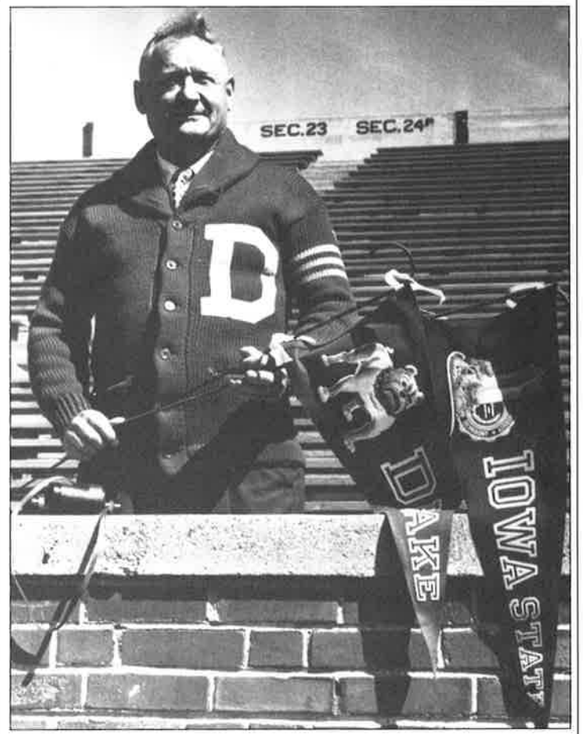
To many of us, Harley Wilhelm was the kind, older gentleman who held the spot of honor at many Ames Lab events and was a great storyteller. He had a detailed and meticulous memory for Ames Lab history, the kind that comes with true love for an organization. And Harley Wilhelm loved Ames Lab.

He was our superhero of sorts, inventor of the process for producing pure uranium for the wartime effort and co-founder of Ames Lab.

In his 90s, Dr. Wilhelm continued to be a true champion of the Lab, sharing his knowledge with any and all who called upon him for a history lesson that only he could give. He was 95 when he died on October 7, 1995. A few short days before his death, he completed a written account of his early days at Ames Lab. Even at the end of his life, Harley Wilhelm was still serving the Laboratory of which he was so purely and fiercely proud.

Following are interesting tidbits about Wilhelm's life and accolades that have been shared over the years.

- proud of his rural Iowa roots – third son of a sharecrop farmer
- thought the center of the universe was his hometown of Ellston, Iowa, in Ringgold County
- sold the heifer his father had given him for helping on the farm so he could buy a suit for his high school graduation
- might never have made it to college had it not been for his skill at basketball – caught the eye of a Drake University coach who recruited him on an athletic scholarship
- one of Drake's greatest basketball players
- led his basketball team to a series of records that remained unbroken for 45 years



Wilhelm was a proud alum of both ISU and Drake.

Story continued on page 4

Message from the Director

Tom Barton Discusses Items of Interest to Employees

In last month's *Insider*, Director Tom Barton said he would talk about his vision for Ames Lab and address employee questions that will give more information and a better understanding of various situations that have an effect on the Lab.

How does it feel to be director again, and is this a long-term commitment?

As I've said to several people who have asked similar questions, I've surprised myself with the enthusiasm and vigor with which I've returned to this position. This is fortunate in view of the current problems, such as reduced budgets and contract uncertainties facing the Lab.

The truth is that I was just flat burned out after six years of dealing with Tiger Teams, foolish DOE demands, environmental concerns, etc., etc. Nine months back in research and teaching without a single thought of having to ever again direct the Ames Lab was apparently a wonderful medicine for what ailed me.

As for the duration of my tenure, I most definitely view this as a long-term commitment. However, I did ask as a requirement for my return that I be reviewed every year, and if there was not mutual agreement for continuance, I would stay on for up to an additional year while a permanent replacement was selected and brought on board. This seems to me to be the way all upper-level administrative positions should be handled. So if you get tired of me, let someone in Beardshear know about it.

To whom do you report?

I was kind of hoping you wouldn't ask that since the answer is rather complicated. Of course, I report to DOE, specifically the Office of Energy Research in DOE headquarters. On the ISU side, Ames Lab reports to the IPRT Director, Professor Joel Snow, and maintains direct contact with the Provost's Office as well as other pertinent offices in Beardshear Hall.

In addition, there is an Ames Lab Oversight Committee (including such people as Vice President Warren Madden and ISU's Director of EH&S Emery Sobottka) to which I report several times a year, and I must say that I've found this committee quite useful. Certainly our unique relationship makes it essential that there be continuous dialog between the Lab and ISU. We can't maximize the unique potential that this relationship affords unless we are working together on mutual goals.

Finally, in my mind the most important reporting relationship is with the employees of Ames Laboratory since that's for whom I believe I am working in this job. As you may know, I've begun a program of personally meeting with each of the groups in the Operations and Administrative Divisions to inform them of our current status and to listen to their concerns. Currently, I'm visiting with one to two groups per week, and I'm definitely learning a lot from this exercise.

What is the status of the Ames Lab contract renewal?

To my knowledge, there have been no changes in the status or proposed status of the contract renewal since I sent out my "Lab-wide Message" in September. People need to remember that the contract for the operation of the Ames Lab is between ISU and DOE, and thus the Lab is not involved in this process in the sense that we are now directly working with either DOE or our elected representatives. Of course, we provide information when requested, and there is no doubt in either the university or the agency about my position on the type of contract that would be most desirable. At this point, I can only reiterate my view that it would be incredibly foolish to tamper with something that has arguably provided the agency with the highest quality product for the lowest cost. I still strongly feel that the Ames Lab should serve as a model of how mission-oriented, fundamental and applied science can be done without the need for gigantic, costly facilities. One must hope that reason and not politics will produce the ultimate result. If so, we will have nothing to worry about.

Research funding is down and overhead costs are the same. What are you going to do about it?

One answer to this question is simple, we are going to reduce overhead costs. The process, however, is complex and not something to be quickly done in a cavalier fashion. I probably have spent half my time since resuming this job working on this problem and haven't really yet scratched the surface. We have to analyze every single thing that we do and ask a number of questions: Do we really need this function or activity? Is it required by law or statute? Is it required by DOE orders and, if so, should these be questioned? Even if it is a required function, can we perform it in a more efficient, cost-effective fashion? I would appreciate receiving suggestions for achieving a more cost-effective operation from any and all Lab employees. The bottom line is that here and throughout the nation federal funding is down, and thus we have an obligation to reduce the cost of doing business. I wish that I could tell you that this will be accomplished without reduction of positions, but that simply is impossible. I can only say that to the degree that it is possible, we will use normal attrition (retirements, resignations, etc.) to accomplish the necessary personnel reduction. I have already begun this process by deciding that we will have one less associate director in the Lab. Thus, Dan Williams, who retired this year from the position of Associate Director for Planning and Technology Application, will not be replaced, and most of the duties of that office have been parceled out to others, including myself.

Of course, the flip side to this question's answer is that we must be much more aggressive in seeking additional funding sources both within DOE and through external partnerships, which most definitely can be with the industrial sector. In the past one-and-a-half months, we have initiated to varying degrees several activities in this regard, including proposals for joint EM/ER funding initiatives and beginning a process of identifying potential collaborations with the College of Agriculture for joint funding of projects by DOE and the Department of Agriculture. We have also established a new (and vastly improved) working relationship with ISU's Center for Advanced Technology Development. In fact, Bob Harris, Associate Director of CATD, has agreed to take on the additional task of heading up the newly established Ames Lab Office of Industrial Outreach. The main mission of this office will be to seek and establish new industrial contracts and collaborations. ■

Bunches of Stuff

"You're just biding time if you don't grow," says Marilyn Kniss, who returned to school at age 50 to get a bachelor's degree in family financial counseling. Now she's just six credits away from a master's in community counseling.

But the road wasn't always paved with yellow bricks, and Marilyn had to do a lot more than click some ruby slippers together to get where she is today. You might call her an American success story. For 18 years, she worked almost every job imaginable to raise her four children on her own, without welfare assistance or food stamps.

"I've gone through my whole life doing bunches and bunches of stuff," says Marilyn, clerk typist for Jim Fritz, Robert McCarley and Cheng Lee. "I've done a billion, zillion things, but I've never made a lot of money," she adds, with a good-natured laugh.

Although she hasn't made a fortune, Marilyn has accumulated a wealth of experiences during her patchwork career.

She's covered the Midwest driving escort vehicles for trucks with oversize loads, worked as a bookkeeper for three Iowa malls, was a rural distributor for a Waterloo newspaper, and has handed out pizza samples in grocery stores. At ISU, she's worked in the College of Veterinary Medicine, Home Economics Extension, and the Center for Agriculture and Rural Development. She's knocked on many doors, selling both Avon products and AAA Auto Insurance. "I don't make a very good door-to-door salesperson because I'm so afraid of dogs," says Marilyn.

One of her favorite jobs was creating the *Single Living Magazine*, which she edited and published from 1988 to 1993. The monthly magazine contained information on personal growth, socializing and how to take care

Marilyn Kniss

of yourself as a single person. It was also the first publication in Iowa to include a 900 number and photos with the personal ads from people wanting to meet other people. As an offshoot of her magazine, Marilyn has given workshops called "Meeting Through the Want Ads," in which she helps people develop insight into their personalities and assists them in writing their ads.

One of Marilyn's goals is to complete her master's degree so she can offer relationship workshops to individuals, couples or families who are looking for ways to improve interactions and open lines of communication.

While she's finishing her master's, Marilyn is adding one more square to her colorful career quilt. She has the unique job of being a mystery shopper for a chain of convenience stores. "I go in, buy something and rate the service I get from the clerk," Marilyn explains.

Delighted with her Ames Lab job, Marilyn says it's a keeper that she plans to have until she retires sometime during the next three to five years. But she may still find time for an extra job if one comes her way. "I don't want to come to the end of my life, look back, and wish there were things I had done," she says. And it's not likely that she will. ■

All in the Family

When Terry Herrman talks about his family, it's evident that many exciting changes are taking place in his household.

"Our family is really growing," says Terry, engineer in Engineering Services. "My wife, Elin, and I are expecting our third child in December, and we're very excited." Their two children are four-and-a-half-year-old Ian and eleven-month-old Carrie. "We saw the ultrasound, and we're pretty sure it's a girl," he says proudly. "We're getting used to this."

Just as the size of the Herrman clan is expanding, so are the activity levels of their two energetic children. "Ian is a little older, and it's easier to take him places and do more things with him," Terry says. "He enjoys a broader range of activities now."

Last summer when Terry was the non-faculty advisor to the ISU solar car, he and Ian followed along the race route and made a father-son vacation out of the week. "Ian really had a great time and enjoyed seeing the solar cars," Terry says. "He was very fascinated with the cars and wanted to ride in them. Although he didn't get to do that, we did spend a lot of time around the cars, and he was able to see them up close."

After the race, Terry and Ian went to the Rocky Mountains in Colorado. "I told Ian I would let him touch a cloud, so we stood on a mountain and watched the clouds coming toward us," he says. "As the clouds came near and surrounded us, all Ian could say was, 'Hey, I'm in a cloud.'"

Terry's daughter, Carrie, is growing and changing also. "She is just starting to walk," says Terry. "It really is a change from several months ago."

Terry says he and Elin enjoy spending time with their kids and relish the weekends. "We enjoy

Terry Herrman

eating at restaurants, going out with friends and spending time together as a family," he says.

Ian must appreciate the free time his father has on the weekends also because Terry spent a few Saturdays building him a backyard fort and swing set. "It's the hit of the neighborhood, and Ian really enjoys it," says Terry.

Whether he's building his son a swing set or working at Ames Lab, Terry works hard and plays hard. Besides his usual engineering duties at Ames Lab and membership in local civic clubs, Terry worked many hours advising ISU's solar car team and designing the car. He expects to be involved with the next car but says, "I have a while before it becomes a full-time proposition again."

Ian has taken an active interest in his father's work and has visited him at the Lab. "As far as he knows though, his dad just draws lines and works with big machines," Terry says with a smile. ■

BULLETIN BOARD

MATERIALS SCIENCES PROGRAM REVIEW

The Materials Sciences Program Review, scheduled for November 9-10 in 301 Spedding, will include 30-minute research presentations by Lab scientists. Metallurgy and Ceramics presentations are scheduled on Wednesday morning, Materials Chemistry on Wednesday afternoon and Condensed Matter Physics on Thursday morning. Everyone is welcome to attend. For more information, please contact:

Rose Bielefeldt
Metallurgy and Ceramics
4-4446

Stacy Joiner
Materials Chemistry
4-7568

Rebecca Shivvers
Condensed Matter Physics
4-3481

Shellie Siders
Office of the Division Director
for Science and Technology
4-1490

RECYCLE YOUR PHONE BOOK

On Saturday, November 11, volunteers will be collecting old telephone books for recycling. You can help this effort by returning your old ISU, TelecomUSA and/or USWest phone books to the Storeroom. Books must be returned on or before November 10. ISU directories are available now, TelecomUSA the week of October 23 or 30, and USWest the week of November 6. Help save some trees by recycling your old phone books.

TRAINING SCHEDULE
Call Paula Ellis (4-5634) to reserve

NEW EMPLOYEE TRAINING
November 7, 16 and 21
8:15-11:45 a.m.
November 9
2:00-5:30 p.m.
November 13
1:15-4:45 p.m.
November 29
12:15-3:45 p.m.
Held in 305 TASF

SEXUAL HARASSMENT AWARENESS TRAINING
November 8
2-3:30 p.m.
Open Session
Held in 301B Spedding

COMMUNITY CPR (RED CROSS)
November 8
12:30-5 p.m.
Instructor: American Red Cross
Held in 305 TASF

HAZARDOUS WASTE MANAGEMENT
November 14
10:15-11:30 a.m.
Instructor: Kay Lampe Hannasch
Held in 305 TASF

HOISTING AND RIGGING
November 15
10-11:30 a.m.
Instructor: Dave Birlingmair
Held in 305 TASF

Tom Barton, director, received the American Chemical Society Midwest Award for outstanding achievements in chemistry. He won the award for "meritorious contributions to the advancement of pure or applied chemistry, chemical education and the profession of chemistry." Barton's contributions are in the area of organosilicon reactive intermediates and reaction mechanisms.

David Jiles, senior physicist, has been elected to the Administrative Committee (AdCom) of the Magnetics Society for a three-year term. The AdCom is the principal body for administration of the Society. The Magnetics Society is the largest professional organization devoted to the study and promotion of magnetism and magnetic materials in the United States.

Lynn Runge, former supervisor of Custodial Services, went on 100 percent disability in June after undergoing quadruple heart bypass surgery. Runge had been on phased retirement with plans to retire in January 1996. In October, she moved to Omaha to be closer to family members and medical personnel overseeing her health care. After serving Ames Lab for 21 years, Runge says, "I think it's one of the best places in the world to work. I've made a lot of good friends here." Once Runge settles into her Omaha home, she plans to work on ceramics and make new friends.

Halloween Hoopla

Last year, this unusual trio raised a few spirits with their Halloween hoopla. Left to right: Carol Mack, Jan Ahrens and Vickie Hahn, all from Occupational Medicine.

Watch Out Dallas!

Referee Lanny Lincoln tosses the coin to see who will kick and who will receive in the first game of the Lab's annual round-robin football tournament. Participating teams include the Metals Development Mad Dogs, Wilhelm Wheezers and the Spedding-TASF combined team called Kick your TASF. Left to right: Curt Purdum, Lincoln, John Eckert, Ben Meyer and Mike Devine.

New Employees

Serguei Budko, Visiting Scientist (Paul Canfield)

Fang Li, Postdoctoral Fellow (Joe Shinar)

Armenak Nargizyan, Visiting Scientist (Bruce Harmon)

Roschen Sasikumar, Visiting Scientist (Rohit Trivedi)

Joakim Trygg, Visiting Scientist (Bruce Harmon)

Promotions

Paul Canfield from Associate Physicist to Physicist

Tom Lograsso from Metallurgist to Senior Metallurgist

Linda Penn from Program Assistant II to Program Coordinator I

Dan Sordelet from Associate Ceramist to Ceramist

David Vaknin from Associate Physicist to Physicist

Troy Vareberg from Engineer I to Engineer II

Tiffany Zachry from Communications Specialist I to Communications Specialist II

Jerel Zarestky from Assistant Scientist III to Associate Scientist

Remembering Harley Wilhelm

(Continued from page 1)

- became legendary for making impossible shots – he bounced the ball off ceilings and steam pipes and once, with a defender hanging onto his back, threw the ball over his head to the basket behind him, winning the game
- inducted into the Iowa High School Basketball Hall of Fame
- finished all the math and physics courses Drake had to offer by the end of his sophomore year and thought he'd try some of "that stuff called chemistry"
- a high school science teacher and coach in Iowa and Montana before beginning graduate school at ISU
- decided chemistry offered more of a future than high school coaching after his football team lost all their games one season – he once said, "Coaching is great guns, if you're winning."
- outstanding baseball pitcher for the Ames Merchants semipro team
- ingenious, world-renowned scientist
- humble, unpretentious man with a brilliant mind
- a great deal of the credit for the existence of Ames Lab goes to his inventiveness and leadership during the Manhattan Project
- associate director of Ames Lab from 1945 to 1966
- had an uncanny skill for making something out of nothing – obtaining hard-to-come-by materials during the war earned him a reputation as one of the most skillful "hairpin and baling wire" equipment improvisers in the history of Ames Lab
- unable to find a replacement radiator for his car due to wartime shortages, his arrival at the Lab was always preceeded by a unique whistle as the struggling vehicle approached
- a first-class tinkerer – if stranded on a deserted island, within a week he would have come up with a pump, within two weeks he'd have a flush toilet, and within three weeks he'd have air conditioning – he could figure out what was otherwise impossible
- penny pincher
- always said if you tried harder, you could get a little more out of anything – even a car battery – if his car didn't start by rolling it down the driveway, his wife and four children had to push it five blocks to the "big hill, and then it always started"
- a do-it-yourselfer – when the top rusted out of his '31 Chevy, he poured cement in it – he didn't make a very good mix because sand sifted out and showered the passengers
- scotch tape was a standard welding supply
- on special occasions, took his family of six to a restaurant in Des Moines because the more you ordered the cheaper it was
- never threw anything away
- told his children about seeing Hailey's Comet so often they thought it was "Harley's Comet"
- when he got to Drake, he found something was missing – he didn't have any pajamas – after complaining to his mother, she got out the Sears catalog and her sewing machine, and within a few days he received a small package in the mail containing new pajamas, complete with trap door and feet
- while babysitting one Saturday morning, he left his children alone in his office for a few minutes – when he returned, the safe was open – "How did that get open?" he asked – "I used my gym locker combination, and it opened," one of his daughters replied – "Some security," Harley grumbled
- played in the Ellston community band – during one concert, the band director announced the next song – Harley leaned over to his brother and said, "I just played that one."
- accomplished accordian player who, for the past 20 years, played turn-of-the-century tunes while riding in the back of a pickup in community parades throughout Iowa
- accepted his failing eyesight in recent years with characteristic good humor, agreeing to referee a Drake alumni basketball game, saying, "It's only appropriate since I'm legally blind anyway."
- at age 90, walked a mile to his office in Wilhelm Hall, bowled on the ISU Faculty Bowling League, attended exercise classes, mowed his lawn, and did his own gardening
- represented the U.S. at the 1955 "International Conference on the Peaceful Uses of Atomic Energy" in Geneva, Switzerland and elsewhere in Europe and South America
- lived by a code of decency, honesty and integrity
- super athlete, super scientist, super person
- gentle personality
- responded to people the same way he approached science – with patience, dedication, genuine humility, concern and practicality
- stellar character
- subtle wit
- Mr. Metallurgy – father of metallurgy at ISU
- made this world a better place
- lived life to the fullest
- classic American success story ■

An avid sportsman, Wilhelm, left, regularly golfed with Frank Spedding, Premo Chiotti and Norm Carlson.

Wilhelm, leaning forward behind his Ellston High School coach, was just beginning his legendary basketball career. (Note school year on basketball – 1915-1916.)

Wilhem inspects an induction coil used during the process to make pure uranium ingots.

In one of his many parade appearances throughout Iowa, Wilhelm played the accordian while his wife, Orpha, crocheted. Goodbye, Harley and Orpha – it was a good song.

The Great Tank Yank

It's What's Underneath That Counts

In late August, workers unearthed and unceremoniously extracted a 3,000-gallon diesel storage tank from beneath a concrete slab near the new Records Storage Building (old Computer Garage).

The tank had held fuel for the Lab's emergency power-generation system. It was installed in May 1970 to replace a single-wall tank that had corroded and leaked diesel fuel into the surrounding area. "After 25 years, the replacement tank no longer met the engineering features specified by today's standards," says Lowell Mathison, manager of the Environment, Safety and Health Group. "State code said it had to be removed by 1998."

"A general contractor was hired to remove the tank," says Mark Nelson, project engineer in Facilities Services. "It came out without any problem. Facilities personnel pumped out as much fuel as possible prior to removal of the tank, and a private company was called in to siphon the rest out," Nelson adds. After the huge cylinder was yanked, it was carted off to a local salvage company.

Although the tank was sound, analysis of soils from test wells showed that the leaked fuel from the original tank had contaminated the surrounding soil for a few yards. However, Mathison says that the contamination is expected to naturally attenuate over a period of years. The Iowa Department of Natural Resources (DNR) has classified this site as "low risk," and no additional monitoring is required. "The location and amount of contaminated soil do not pose a threat to drinking water supplies, and at this time all tests indicate that it is not migrating," says Mathison. He adds that the low-risk classification by the DNR brings to a close the assessment and remediation activites associated with this site.

Digging up the past – after 25 years, workers removed the old diesel storage tank.

To better monitor stored emergency fuel in the future, the Lab has installed a 1,000-gallon, above-ground diesel storage unit. "It actually consists of two tanks with a layer of concrete between them for fire safety," explains Mike Vaclav, Facilities engineer. "This design allows us to monitor the concrete layer for any signs of leakage from the inner tank wall. Also, all of the piping for the tank is set up in a double-pipe system."

With the switch to the new above-ground tank, Vaclav says the Lab has reduced the amount of fuel it stores for emergency power generation. "The new tank could run the whole Lab on emergency power for about 48 hours," he says. ■