

## World and National Engineering News in Brief

### GE Transportation reports first quarterly loss in 20 years

LAWRENCE PARK -- According to a quarterly statement released by General Electric, the Lawrence Park-based Transportation segment of its business posted a \$157 million loss in the fourth quarter of 2009.

The loss was expected, and even predicted in early 2009 by CEO Lorenzo Simonelli, who estimated that locomotive production could fall by 44 percent for the year.

Despite the quarterly loss, the Transportation segment reported a yearly profit of \$473 million, around half of 2008's yearly total.

### Sponge created for spill cleanups

Researchers at Case Western Reserve University have developed a lightweight sponge designed to absorb oil out of contaminated water while leaving the water behind. The oil can then be squeezed and reused.

It is hoped that the material can be used to clean up factory floors, highways, and large bodies of water. According to EPA estimates, 10 to 25 million gallons of oil are spilled every year in the U.S. alone.

### New standard set for world's most accurate clock

There is now a new "world's most accurate clock." The National Institute of Standards and Technology has created an atomic clock based on a single atom of aluminum, setting a new standard for accuracy. The clock is twice as precise as the mercury-based atomic clock that previously held the title.

According to Physical Review Letters, the new clock would neither gain nor lose a second in the next 3.7 billion years.

## MECHANICAL ENGINEERING

# Warley settling in as M.E. program chair

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editor-in-chief

After half a year in his position as the Department Chair of the Mechanical Engineering program, Russel Warley is starting to feel like he should really be there.

He has become, in his words, a "leader among peers."

Warley took over the position last July, when it was vacated by William Lasher's resignation. He has used the friendships and relationships with faculty and colleagues to create a type of "consensus" leadership of the department. This has presented what Warley thinks is the best way to lead, but has also given several distinct challenges.

"You don't just hit the gavel and have it done," he says, drawing from his 20 years of experience managing in industry, rather than a university. "There's no such thing as tenure in business, so you didn't have to worry about that."

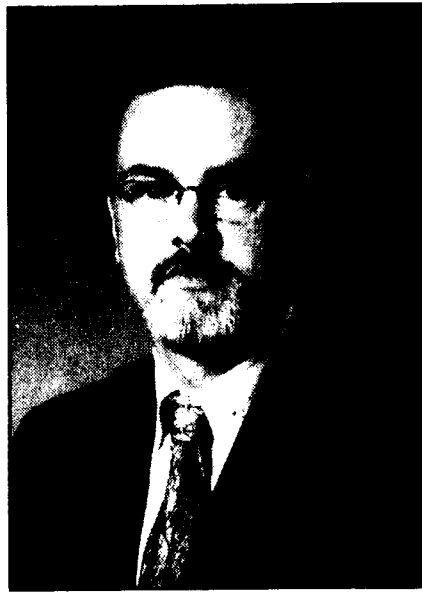
Fortunately, he says, those relationships with faculty make the job easier. "We have very competent, very collegial, cooperative faculty," he said. "We haven't had any issues with faculty even for a second, so that makes it very easy."

Lasher, who held the chair position for a decade, still remains as a "fall-back" for Warley, giving advice and assistance when he can.

"I help with developing schedules for teaching - what classes are held when, who teaches what, and so on - as well as problems with students," he says. "Graduation requests, transfer credits, graduation requests, that type of thing."

Despite the fact that Lasher advises the faculty member who is now the chair for his own department, he thinks Warley is off to a good start.

A lot of that good start is due to the transition which actually began fairly



Russel Warley, left, had some help transferring into the position heading up the Mechanical Engineering program by his predecessor, William Lasher, right.

### WHAT'S NEXT?

#### DR. RUSSEL WARLEY'S LONG-TERM GOALS FOR THE M.E. DEPARTMENT

##### 1. E-Learning

Does it make sense for the School of Engineering to participate? If so, how? The faculty would have to be intimately involved.

Since a lot of schools are moving towards this, this is something to explore in the future.

##### 2. Wider reputation

The M. E. program is solid with a good reputation in the local area, particularly with local businesses.

The next step is to expand that reputation out to a further-reaching area, both in Pennsylvania and elsewhere.

##### 3. Make educational research known

Employers are satisfied with the graduates that the M.E. program provide. Wharley says, though, that many do not recognize the innovation in educational processes going on at Behrend.

well before Warley took the post.

"Really, I ramped into the position," Warley said. "He became the Dean's Representative to University Park, and dealt with a lot of students who needed to transfer after two years. That helped him prepare for many of the issues which come to his desk on a daily basis today."

"Bill [Lasher] and I knew a little early that it was likely me that would be taking the role," he said, "so I

started to work with him in advance on some things, start training early."

Amongst those early training opportunities was the Fall 2009 Semester schedule, which the two created together last spring.

"There's a lot of potential repercussions there for even a minor error," Warley said. "If a certain class overlaps and you don't notice until after the semester starts, then you've got to deal with contacting every student in

a certain section of a certain class, and for many it can severely impact their semester schedule."

As for Lasher, life is a little easier without having to deal with possible catastrophes around every turn.

"I'm under a lot less stress," he said. "I have a lot more time to do teaching research, talk to students, everything else. The toughest challenge with the program chair was the continual flow of problems; you get done with one and there's another to deal with."

Warley's long-term goals are still intact, but that continual flow of problems has presented its challenges as well.

"It feels like, as an employee, there's a lot more coming at you at a faster rate than previously," he said. "It feels like I'm a bit less in control, because you can't necessarily foresee the workload coming at you. It makes it hard to plan for and accomplish longer- or intermediate-term goals."

How does he deal with transferring from an assistant professor position to handling the problems of a department?

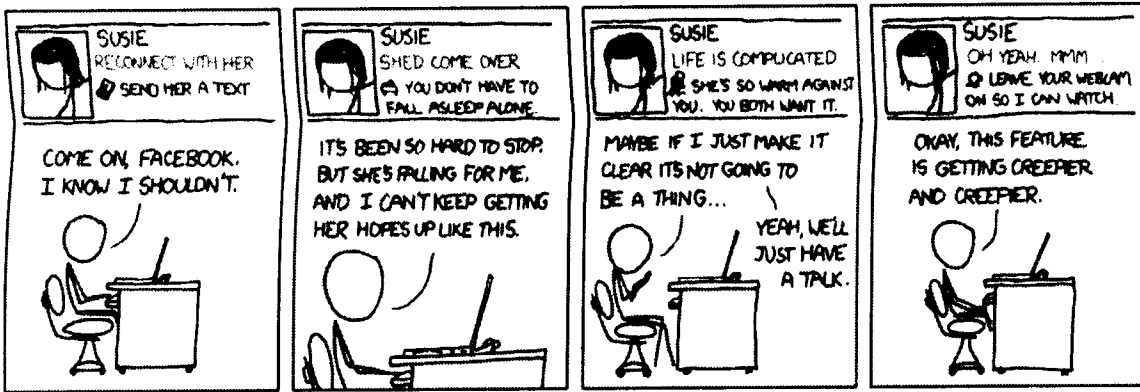
"It's tough," he said. "The way I do my teaching, my workload was very high. The way I teach, there was a lot of out-of-class stuff, constant student contact, and lots of grading. Now, it's all continued, plus there's a little more."

And it's taken its toll, he says. "Psychologically, I feel like with the flood of things that are coming in, that I'm somehow going to drop the ball or let something fall off the bottom of the to-do list. There's a little bit of apprehension, I think, but just mainly because I'm new."

"But I knew what I was getting into when I agreed to take the position," he said. "It'll probably take a full year cycle including the summer to see how I'm really doing in the position, assess how the last year went."

xkcd

### A webcomic of romance, sarcasm, math, and language.



### Engineering Internship available:

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Employer: General Electric  
Job Function: Engineering / Accounting / Banking / Administration / Sales  
Location: Erie, Pa.  
Minimum cumulative GPA: 3.0  
Deadline: February 19, 2010

Details: GE offers co-op positions for a variety of majors, from computer science to mechanical engineering to business administration. Apply online at [www.gecareers.com/campusinterview](http://www.gecareers.com/campusinterview). Select "Business Specific Internship," then click the drop-down menu and select "GE Transportation," then "GE Transportation Co-op."

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## Alcohol Fact,

Did you know more money is spent promoting alcohol each year than any other product? In all of this advertising you never see this one fact: alcohol is a drug.

It is the most widely used and commonly abused psychoactive drug in the world.

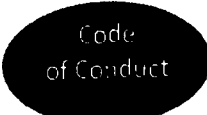
Even at low doses, alcohol significantly impairs the judgment and coordination required to drive a car or operate machinery safely. Low to moderate doses of alcohol can also increase the incidence of a variety of aggressive acts.

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