



Montana Section News

November, 2004

Chair's Message

Ross Snider

It looks like Intel is having troubles reaching 4 GHz. I'm a little disappointed since I was looking forward to the 4.77 GHz speed that would then be 1000 times faster than the original IBM PC introduced in 1981. In terms of clock speed, being 1000 time faster is the difference between waiting 1 hour for a result or 42 days. In order to get the clock speed they do have, Intel has made the pipeline in the Pentium almost 20 stages deep to win the GHz marketing race. AMD in contrast uses a pipeline that is about half as long and gets better floating-point performance at lower clock speeds. What Intel is focusing on now is a dual-core design. This means that the focus will now be on parallel processing at the chip level in order to build faster computers.

The December meeting will be at 6:30 p.m. on the 9th at the Northwestern Energy Building. The speaker will be Dave Ford: "Raising Internet Security Knowledge" This educational, entertaining presentation will address the threats facing small to medium-sized networks today, from outright attacks to simple user naiveté. You do not need to be an IT security expert to protect your system. You will leave this meeting with a clear plan to identify and neutralize the threats to your organization. Learn the 5 steps to maintaining network security while supporting a mobile and productive workforce.

Did You Know

From last month's Did You Know. Murphy of Murphy's Law was an EE. Captain Edward Aloysius Murphy was Major John Paul Stapp's trouble shooting engineer in 1949 when Stapp's second rocket sled experiment failed to produce any data.* (Stapp was collecting data that was eventually used in the design of low altitude ejection systems.) Murphy investigated and found that the instrumentation had been installed "backward". He reported to Stapp that: "If there's more than one way to do a job and one of those ways will end up in disaster, then someone will do it that way." Stapp condensed this for the visiting press as: "If something can go wrong, it will."

*Reference: "Murphy Makes No Mistak", Kiwanis Magazine, June-July, 1997.

New Virtual Museum Exhibit Shows How Big Small Is (By Erica Vonderheid)

A new exhibit in the IEEE Virtual Museum—where the history of technology is explored and explained by the IEEE History Center—traces the development of microelectronics.

Let's Get Small starts with the invention of the transistor in the 1950s, tracks the miniaturization of electronics through integrated circuits and microprocessors, and ends with today's latest nanotechnology developments. The exhibit also describes the early vacuum-tube computers like the ENIAC, which took up an entire room. Today such machines are dwarfed in computing power by IC-based pocket calculators.

Several interactive multimedia animations in the exhibit explain how transistors work, describe the way ICs are made, and show how computers use microelectronics to manipulate digital information. Intel Corp.'s legendary Gordon Moore—author of Moore's Law, which predicted the shrinking of semiconductor memory—is featured in a video interview talking about the impact ICs have had on computing.

Visitors end their tour of the exhibit with an exploration of microelectromechanical systems, or MEMS, often built with parts having features of 100 nanometers—one billionth of a meter—or less. To visit the IEEE Virtual Museum, go to <http://www.ieee.org/museum>.

Section Officers and Executive Committee

Chair Ross Snider
rosss@ece.montana.edu
406-994-1645

Chair-elect ???

& Vice Chair

Sec'y/Treas. Brett Swimley
brett.swimley@aedinc.net
406-585-8892x16

PACE & GOLD Chair

Jason Kay
jasonkay@aedinc.net
406-585-8892

Pre-College Education Committee Chair & Student Branch Advisor

Ross Snider
rosss@ee.montana.edu
406-994-1645

Membership Development Committee Chair

Jason Daugenbaugh
jasond@ieee.org
406-585-8892x15

Section SM Nominating Committee Chair

Don Pierre
Pierre_Don@ieee.org
406-587-4065

Moose Call Editor & SAMIEEE Recipient

Bill Jameson
b.jameson@ieee.org
406-994-5970/586-0280

Student Branch Chair

Calvin Coopmans
cal@forg.net
406-556-1375