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IN BRIEF

Memory filters help fulfill brain storage capacity

EUGENE — It's not how much you know, it's how much you can filter out, according to a new study on human memory.

University of Oregon researchers compare the brain to computer memory — even if you could get the equivalent of more RAM for your brain, the extra storage capacity probably would not make it any easier to find where you left your car keys.

The study is the first to demonstrate that the level of mental awareness, or "visual working memory," depends on the ability to filter out irrelevant information, researchers say.

"Until now, it's been assumed that people with high-capacity 'visual working memory' had greater storage," according to Edward Vogel, a University neuroscientist who led the research.

The study used a new technique for measuring brain waves, developed by Vogel, allowing researchers to record the effects, moment by moment, of introducing new visual information.

The test subjects were asked to remember arrays of colored squares or rectangles. In one experiment, researchers told subjects to hold in mind two red rectangles and ignore two blue ones. Without exception, high-capacity memory individuals were good at dismissing the images of the blue rectangles, but lowcapacity individuals held all of the rectangles in mind.

-The Associated Press

Switch: Three universities combine research

Continued from page 1 Weiss said.

Weiss said the University and Penn State began collaborating on projects related to these issues in 2001, when his graduate student Rachel Smith, who graduated from the University's Robert D. Clark Honors College in 1999 and wrote her honors thesis in Hutchison's lab, visited Eugene to see old friends.

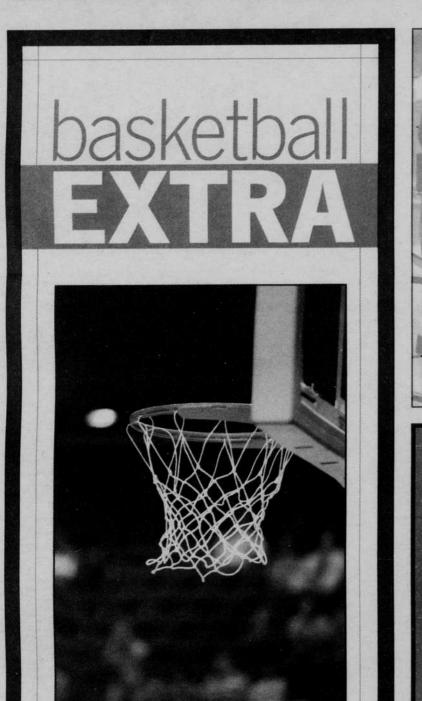
"She came back with the molecules

in her pocket, basically," Weiss said. Hutchison said it is too early to

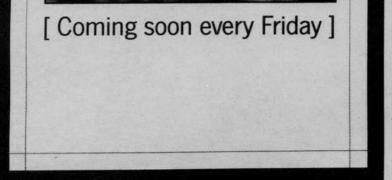
predict exactly how the recent study's findings, which will be published in the December issue of the Journal of the American Chemical Society, will be used.

Inman, who will earn her doctorate in chemistry at the end of this term, said a possible application of singlemolecule switches could be computer memory cards. Computers encode information in a language made of zeroes and ones, two commands that could also be interpreted as on and off. The scanning tunneling microscope could encode information onto the memory chip by turning switches on and off in designated patterns and then read the information later.

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