

Buffaltdown

Video games not just for kids anymore

CU professor Payson Sheets (A&S'67, MA'69) is into video game technology, but don't expect to find him playing Xbox games in his office.

Instead, the archaeologist is using the technology, along with satellites, to learn about ancient peoples who lived near the Arenal volcano in Costa Rica from roughly 500 B.C. to 600 A.D.

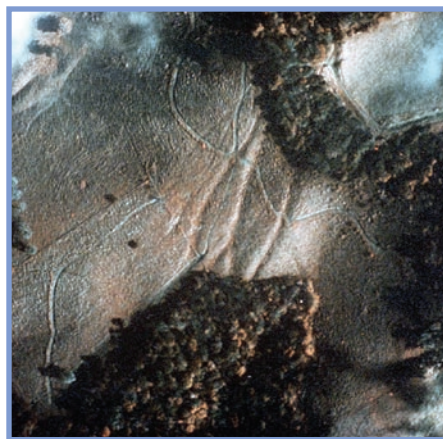
To locate eroded footpaths — invisible to the eye on the ground — that lead from an ancient village to a burial site 10 miles away, Sheets and his team used infrared satellite images. The satellites

peered into deep jungle foliage to detect plant growth typically found in paths' narrow trenches. Then the team used 3-D video game software to "fly" along the 2,000-year-old footpaths at various altitudes and directions and to zoom in on landscape features.

As a result the researchers, including NASA archaeologist Tom Sever (PhDAnth'90), experienced a villager's view of the paths, leading them to discover areas where people collected stones used for graves and locate springs where villagers got water during feasts at the cemeteries.

Interestingly, the researchers found the villagers repeatedly reused the routes amid recurring violent eruptions of the Arenal volcano.

"We know now that some villages adapted to volcanic eruptions at least four times, retracing the same footpaths to their cemeteries," Sheets said. "We would never have known this without the imagery. It indicates to me they had a deep need to contact and recontact spirits of ancestors by attempting to access the supernatural."



COURTESY PAYSON SHEETS



Ramon Rivas, a Costa Rican worker hired by the CU research team, digs deep to uncover an ancient footpath. Top left, an infrared satellite image shows three paths used as long ago as 500 B.C.



PHOTO COURTESY KEVIN WHEELER

Kevin Wheeler (CivEngr'97, MS'00) helps build a water tank for a drinking water system in the Dominican Republic in 2003.

CU grads flock to Peace Corps

In January CU became the sixth university in the nation to surpass 2,000 in the number of graduates who have served in the Peace Corps.

Since the organization's inception in 1961, 2,052 CU-Boulder alumni have served as Peace Corps volunteers.

"This recognition of our Peace Corps volunteers is a tribute to the strong sense of social consciousness and idealistic spirit of our students," said CU-Boulder Chancellor Bud Peterson.

Committing 27 months of

their lives to helping others in nations across the world, CU's Peace Corps volunteers have provided myriad assistance including educating children, providing clean water and helping adults launch new businesses.

Audra Caravas (Psych'04) is one of the university's newest Peace Corps volunteers. She arrived in El Salvador in February to serve as a youth development coordinator after explaining, "I find I'm happiest when I'm helping others."

Noble intentions have Nobel Prize implications

If another CU professor was to win the prestigious Nobel Prize or MacArthur Fellowship this year, she would have to return the hefty monetary award, according to a strict interpretation of Colorado's ethics law passed by voters in November.

Created with noble intentions, Amendment 41 was designed to prevent lobbyists and politicians from creating cozy relationships through travel and entertainment perks. It bans all gifts worth more than \$50 given

to any lawmaker or government employee. But wording that pertains to Colorado's public higher education institutions has left a trail of ambiguities, making it unlikely CU professors like John Hall, who received about \$325,000 as co-winner of the 2005 Nobel Prize in Physics, could accept the money. It also could prevent university employees or their children from receiving scholarships.

Confusion over the ethics law led CU President Hank Brown

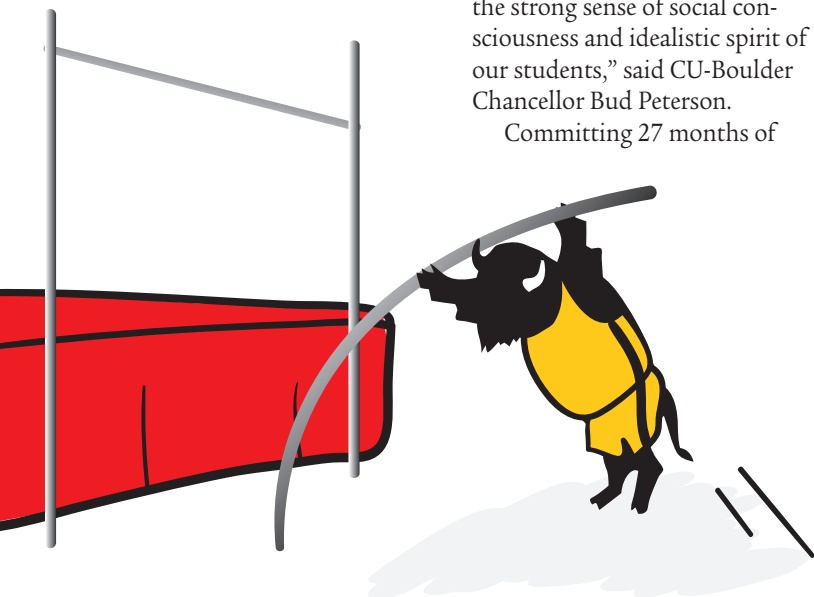
weekly science experiments on Denver's KUSA-Channel 9, told the *Denver Post*.

Spangler's toys should be in stores within several months. To satisfy your yearning to do more than just drink soda, check out Spangler's website — www.stevespangler-science.com.



(Acct'61, Law'69) to request clarification from the Colorado Attorney General's Office, which concluded that strict interpretation of the ethics law produces an "absurd result." State legislators are expected to address the concerns but a reasonable solution may require another statewide vote.

See www.cu.edu/news/amendment41.





New building plaques draw flak

When the CU student union passed legislation to increase student fees to help pay for new campus buildings in 2004, they made certain student contributions were recognized.

A plaque to be hung in each building funded in part by student fees reads: "The University of Colorado Student Union made this building possible... when the State of Colorado would not fund capital projects in higher education."

But a bill introduced last fall would change the wording to state: "...when traditional sources of funding were limited."

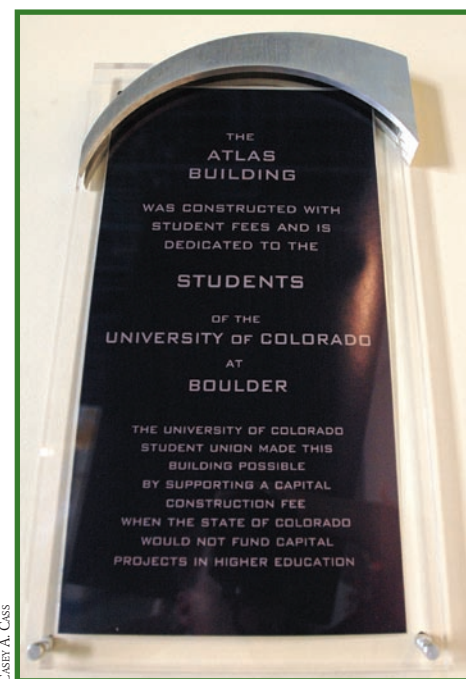
Current tri-executives who introduced the bill argue the earlier wording is inaccurate as the state did give \$3.9 million toward the buildings. The students funded \$71.3 million.

But others like Eugene Pearson (MCDBio'05), former president of the Legislative Council, think the initial wording captures CU's dire situation and question why the administration waited so long to approach student government leaders about the wording.

"It was a very bleak time," Pearson told the *Colorado Daily*.

"We had to [pass the fee] because our law school was at risk of losing its accreditation. We should never have to come to that point in history again."

In late January UCSU voted to change the wording to the less controversial version. Plaques already posted on the Wolf Law and ATLAS Buildings will need to be changed.



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The art of mogul migration

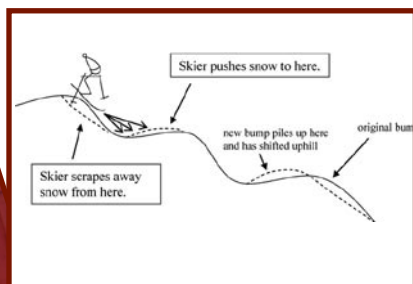
What do a flock of birds have in common with a field of ski moguls?

A lot, according to Dave Bahr (PhDGeol'93), an avid skier and Regis University computer science professor who studied mogul formation last ski season. As it turns out, flocks of birds and moguls are naturally occurring systems that organize themselves without an "organizer."

Say what? Bahr observed that moguls use a "self-organizing" system to migrate uphill, rather than downhill. He ar-

rived at this conclusion with the help of Tad Pfeffer, a CU civil engineering professor, who helped Bahr place a time-lapse camera below a mogul-ridden slope at Mary Jane at Winter Park. The camera took photos every hour for the rest of the season.

The footage revealed the moguls' movement upslope, providing fodder for many a chairlift discussion. A Mary Jane official said the results could influence where the resort puts gates on trails.



Alum David Bahr, left, filmed moguls to determine that they migrate uphill, as in the diagram above.



Loving iPods to deaf

CU student concerns tend to revolve around studying, 20-page papers, dating and future careers.

But they should add hearing loss to that list, says Cory Portnuff, a CU doctoral candidate who established the first-of-their-kind guidelines on how loud and long portable media users can safely play their music.

Listening to an iPod for 4.6 hours per day at 70 percent volume using stock earphones is safe, Portnuff says. But using "stock" earphones — those that come with the player — and listening to music at full volume for more than five minutes a day can increase the risk of hearing loss.

Moreover, his team found that 80 percent of students listened at higher volumes when there was

background noise in comparison to 6 percent of students listening in a quiet environment. In other words, if you're getting on a plane soon, buy "isolator" earphones, which block out background noise since most people use them at a lower volume than "earbuds" because they block out the pandemonium around you.

Maximum daily listening time for iPod stock earphones by percent of volume control to prevent hearing loss:

Percent	Time
10-50	No limit
60	18 hours
70	4.6 hours
80	1.2 hours
90	18 minutes
100	5 minutes

SOURCE: CORY PORTNUFF

Tim Seastedt, CU biology professor, talking about serving in the Peace Corps at a celebration in January to honor the more than 2,000 CU grads who have served in the Peace Corps:

"This is how you can see the world when you are broke."

Seastedt was stationed in Tonga with the organization from 1972-74.



David Norris, integrative physiology professor, commenting to the *Daily Camera* about his study of Boulder Creek on how effluent from sewage treatment plants can change male fish into females:

"What we see in the fish downstream is as if they are taking birth control pills."



Hannah Polow, a Boulder campus coordinator of the Student Public Interest Research Group, to the *Daily Camera* about the November elections:

"I think a lot of people don't realize how many young people there are. If we all started voting, politicians would have to pay attention."



Kevin Ryan, a chemist visiting campus for a 9/11 panel, who said he was fired from Underwriters Laboratories after he challenged the lab's analysis of the performance of the World Trade Center's steel:

"Neither jet fuel nor office furnishings can cause that kind of fire."



CU President Hank Brown (Acct'61, Law'69) joking about his dislike for the Engineering Center's architecture while announcing his resignation effective February 2008:

"It is with some sadness that I recognize that there will be one goal that we haven't achieved and that is my personal goal of the total demolition of the engineering building. It is a unique monument to the aesthetics of the use of concrete."