Painting at the Speed of Light

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The UA Student Optics Chapter makes connections between undergraduate and graduate students and local high school students. The organization serves to promote math, science and engineering.

(PhysOrg.com) -- The Student Optics Chapter has built a laser graffiti system intended to spark public interest in optical sciences.

The international science community is uniting around an invention so versatile that it may be used in DVD and CD players, operating rooms for surgeries, to scan barcodes, and more.

For one year, people worldwide will celebrate the 50-year anniversary of the laser's invention - and a University of Arizona student-led group has joined in.

Typically, the UA Student Optics Chapter, or SOCk, works to develop an appreciation of optical sciences in the public. However, the group also became involved in an international celebration, known as LaserFest.

"This year, I think, has been particularly active for us. LaserFest is actually a worldwide celebration," said Stefano Young, president of SOCk. "We're trying to take a big part in this celebration of 50 years."

Recently, Young, a graduate student in the College of Optical Sciences, and other SOCk members entered a laser graffiti video competition organized by the Optical Society of America, a LaserFest sponsor.

As part of LaserFest, the student organization's members will use the system they developed to train and involve local youth as part of their outreach efforts.

The requirements of the competition were simple: build a laser graffiti system, film it in action and put it on YouTube.

Contestants were given instructions on how to create laser graffiti using a laser pointer, camera and projector. Each participating team was given a $700 grant to defray costs of building the system, which SOCk describes as the equivalent of a giant Etch-a-Sketch.

SOCk members set up their laser graffiti system by the Meinel Optical Sciences Building and at Sky Bar on Fourth Avenue. At each location, the students filmed passersby who were invited to try out the system and Blake Coughenour, a graduate student in the College of Optical Sciences, directed and edited the video. Patrons at Sky Bar were so interested that the bar invited SOCk to return any time.

Coughenour also filmed Young conducting impromptu interviews of

people playing with the laser graffiti system. He asked them what they knew about the laser, which was usually not much. The system, however, gave them a reason to learn.

"For something like this, something with a real small learning curve, anyone can pick up a laser pointer and start doing stuff that they're used to, like drawing and using crayons," Coughenour said.

"It's a great way to get people to coalesce around one thing that's happening and start explaining to them about the laser," he added.

Contest submissions were panel-judged based on technical merit and creativity. A people's choice award was also established based on the number of views a video received. The video competition winners were announced on May 16, the anniversary of the day that the laser was first demonstrated.

While SOCk members did not hear back from contest organizers, they said they were pleased that the laser graffiti system was so well-received.

"It's really easy to try for anyone, so we figured once we had the system or the software working, we can use it for various outreach activities," said Garam Yun, another graduate student in the College of Optical Sciences. "It's really interactive."

Yun, who is a community speaker for SOCk, explained that the club plans to use the system more often, particularly during lessons taught by its members in high school and middle school classrooms. It also will be used at an annual summer camp organized by SOCk for teenagers interested in optical sciences.

"People tend to think scientists are just nerdy, but we can do really cool stuff. It's not something that really far away from your regular life," said

Yun. "You can do some artistic stuff here, and it's everywhere around you."

More information: www.laserfest.org/

Provided by University of Arizona