JoVE Brings Scientific Journals to Life

Here's a company that focuses on the visual aspects of STM publishing.

FOUNDER

Moshe Pritsker co-founded *JoVE* (*Journal of Visualized Experiments*) in late 2006 to solve a problem that he says has plagued scientists for years: the inability to replicate scientific experiments published in traditional scientific journals. As a Ph.D. student at Princeton University, Pritsker found himself struggling with the same challenge. Scientists "typically read scientific literature and try to reproduce what is written there in order to integrate it into their own work," says Pritsker, *JoVE*'s CEO and editor-in-chief. "In nine out of 10 cases, this approach does not work," he says. "You read something, try to do it in your own lab, and it does not work." He says it highlights a real problem with knowledge transfer: Peer-reviewed literature simply can't convey all of the information necessary to reproduce an experiment successfully.

STARTUP FACTS

To bypass this challenge, Pritsker says that scientists seek others who have already conducted a particular experiment and ask them if they can watch the team complete the work. When Pritsker was working on his Ph.D., he could not replicate an experiment that appeared in a prominent biological journal. So he flew from Princeton, N.J., to the U.K. to observe the experiment firsthand.

"I went there, I learned it, and I came back, and did it," says Pritsker, who then decided that there had to be a better (and easier) way. He determined that the solution would be "to bring this 'show me' effect into a scientific publication … which is not going to be any more text, but which is going to be a video that shows exactly how to do this or that procedure."

After graduating from Princeton and moving on to Harvard Medical School/Massachusetts General Hospital, Pritsker took the first steps to launch the company. He bought an inexpensive video camera and started filming experiments. Nikita Bernstein joined Pritsker to work on IT development, and then Klaus Korak came on board to provide the financing piece that the team needed to launch *JoVE*.

Pritsker explains that it was important for *JoVE* to be considered a true scientific publication to gain acceptance among the scientific community. To help accomplish this, *JoVE* established an editorial board, which now consists of about 25 faculty members from institutions such as Harvard and Princeton universities. The journal is also indexed in PubMed and MEDLINE.

COOL TECHNOLOGY

Pritsker says that when he first developed the idea for *JoVE*, he thought scientists would film their own experiments and send them to *JoVE*. But after filming some videos himself, he thought otherwise. "Making a video of an experiment is much more difficult than making a video for YouTube," says Pritsker. "The requirements for filming and editing are much higher."

Pritsker says that an average experiment is about 5 hours long and yields about 2 hours of video. From there, it has to be edited down to 10 minutes because people won't typically watch videos longer than that, he says.

To help scientists with their videos, *JoVE* created a worldwide videographer network of video professionals from 15 countries, ranging from the U.S. to Japan. The videographers travel to the labs, typically at universities, and film the experiments. The video is then sent to *JoVE*'s headquarters in Massachusetts, where it is edited, published, and indexed in PubMed.

Pritsker explains that the process actually begins with a written article that scientists submit to *JoVE*. *JoVE* editors review the article and then it is peer reviewed, just as a traditional scientific journal article would be. Once accepted, the article is then converted to script, and the video professionals film the experiment.

MORE VIDEOS, MORE INTEREST

The majority of *JoVE*'s video content is available by subscription; 20% is available via open access (OA). Initially, Pritsker says the company wanted to follow an OA model, but it didn't make sense financially. *JoVE* began offering subscriptions in mid-2009; it currently has 220 subscribers, including universities such as the Massachusetts Institute of Technology and Yale, according to Pritsker.

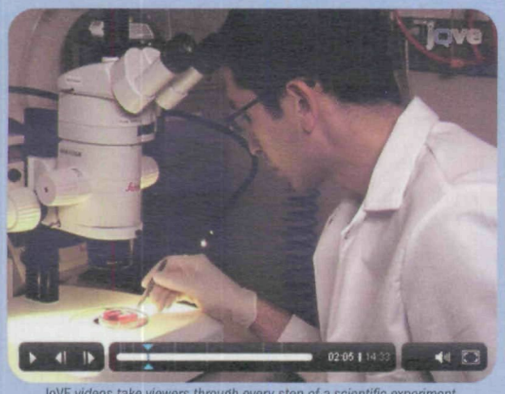
JoVE now produces 50 videos a month, up from 1 year ago when the company produced about 10 to 20 videos each month. The company's work force has also expanded from 15 people in 2010 to 40 today.

Content has also grown and is now offered in subject-specific sections, such as *JoVE* Neuroscience and *JoVE* Bioengineering. "We would like to continue what we have established but also move to other areas of science, like physics or environmental science," says Pritsker.

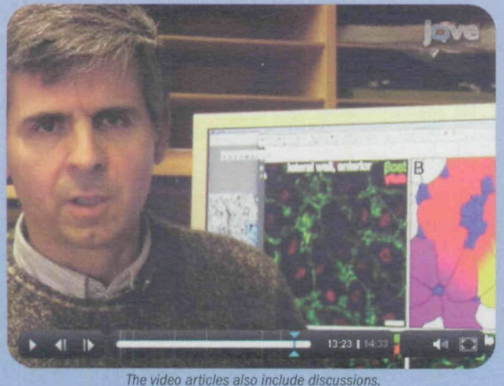
FIVE-YEAR PLAN

While video publications are a fairly new concept, Pritsker says he expects them to become more prominent in scientific publishing moving forward. "I expect that within 5 years, we will have more video journals and we'll have more content produced," he says. He hopes video journals will become prominent publications just as the traditional scientific journals have been for many years.

"We hope that in 5 years, we'll be in a situation where scientists or students have a question [and ask] 'I don't know how to do this experiment or I'm having difficulty, what should I do?'—the automatic answer will be *JoVE*," says Pritsker.



JoVE videos take viewers through every step of a scientific experiment.



The video articles also include discussions.

Marji McClure is a freelance writer based in Connecticut. Send your comments about this article to itletters@infotoday.com.