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### OFFERING STUDENTS REAL-WORLD CONNECTIONS FORMER OCLI EXEC BRYANT HICHWA, NOW A PROFESSOR AT SSU, BLENDS OWN TELECOM

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COLUMN: MAKING A DIFFERENCE

Bryant **Hichwa** returned to the classroom after a two-decade sojourn into private industry that gave him an insider's view of the boom and bust of telecommunications.

“Every day you would come to work, there was a new discovery,” said **Hichwa**, who spent 12 years as vice president and research director for Optical Coating Laboratory Inc., which is now part of JDS Uniphase.

“Customers called every day wanting something new ... It was like you were on a roller coaster,” he recalls.

And it was an experience that makes him a better teacher, **Hichwa** said.

“I cannot only teach the theory, I can bring them the real-world experience, what is important in this class, what are the lessons that you really need,” **Hichwa** said. “Many teachers do not have that connection to what the students need when working in an industry or a national lab.”

That experience was one of the reasons that **Hichwa** was one of two SSU professors chosen by the Academic Senate to receive excellence in teaching awards for 2004-05 school year.

“What Bryant really brings to the table is the incredible experience of industry and a passion for teaching,” said Lynn Cominsky, chairwoman of the Department of Physics and Astronomy. “There is nothing as good as having real experience in real work as far as preparing students for the real world or graduate school.”

**Hichwa** had been a part-time teacher at SSU since 1990 before taking a full-time position in the physics department in 2002, quickly becoming a professor and earning tenure.

**Hichwa** teaches both graduate and undergraduate courses in physics, including physics of music, designed to introduce science to nonscience majors.

In that course, the wave lengths of music are analyzed to show scientifically why, for instance, the priceless Stradivarius sounds better than an ordinary violin, and a French baroque bassoon produces a sharper note than a German-made bassoon of the same era.

"Every instrument has a tonal quality," **Hichwa** said. "I can go on my computer, and when someone plays the instrument, the students can see all the harmonics simultaneously as you play, from note to note. You have a visual representation of the instrument."

The course also deals with the mathematics of music and "why the holes are where they are in the clarinet."

He also teaches a course in which students learn to use the state-of-the-art equipment in the SSU telecom lab, which has more than \$3 million in instruments donated by local companies, including OCLI.

**Hichwa**, 58, who splits his time between homes in Santa Rosa and The Sea Ranch, and his wife, Diane, also are active environmentalists.

They have been involved in the Audubon Society since 1969, serving on the board of the Madrone Audubon Society.

They also travel widely, returning just a week ago from a monthlong trip to Africa where the highlight was a visit to Rwanda to see the mountain gorillas.

"It was a rigorous hike to 8,700 feet from 6,000 feet," **Hichwa** said. "I never thought in my wildest dreams I would see these mountain gorillas."

And he saw them close up.

"One of them touched me as it went by on the trail. It kind of whacked me to get out of the way," **Hichwa** said.

**Hichwa** said his penchant for science fits in well with his concerns for the environment.

"You need to deal with scientific facts when you are dealing with any problem. When you are talking about the environment, you have to go back to good hard scientific facts to make decisions," **Hichwa** said.

**Hichwa** said it is important ``to preserve the wild places on this planet. Once they are gone, they are no longer there, you cannot recreate them."

**Hichwa** received his undergraduate degree from Georgetown University and a doctorate from Notre Dame.

He was a professor for 10 years at Hope College in Holland, Mich., before leaving to work for Donnelly Corp., which makes glass, mirrors and other parts for automobiles, then moving to OCLI in Santa Rosa.

``I felt there was something lacking in my education, I didn't have the real-world, hands-on experience," **Hichwa** said.

**Hichwa** entered a telecommunications industry that ``obsoleted all the existing communications, all in about 10 years," **Hichwa** said.

OCLI produces a wave division multiplexer, which allowed telecom companies to put 40 signals on a single strand of fiber optics, greatly expanding the ability of fiber-optics to carry communications.

``Our technology was the backbone of the network," **Hichwa** said.

He left OCLI in 2001 to be chief operating officer for a new Santa Rosa development office for MetroPhonics Inc., a Canadian telecom networking firm. But that office closed within 10 months.

``As we began to tool up the business side of the company, I realized the technology was not ready, and it made no sense to set up sales and production," **Hichwa** said.

**Hichwa** then took an open position at SSU.

``I am having a ball," **Hichwa** said. ``It is a lot of fun to give back to the community."

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PHOTO: 1 by JEFF KAN LEE / The Press Democrat

Bryant **Hichwa** spent 20 years in telecom and now teaches at Sonoma State University.

**Infobox:**  
**BRYANT HICHWA**

Age: 58

Position: Physics professor at Sonoma State University

Awards: Excellence in Teaching, 2004

Past experience: Vice president and research director at Optical Coating Laboratory Inc. (now JDS Uniphase), chief operating officer of MetroPhonics

Avocations: Environment and music  
Home: Santa Rosa and The Sea Ranch

Wife: Diane **Hichwa**

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