

STANFORD UNIVERSITY BRAINSTORM

THE LATEST LICENSING NEWS FROM THE OFFICE OF TECHNOLOGY LICENSING (OTL)

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Why is Mary Albertson so happy? Clearly it has to do with Stanford technology.

An M.A. at OTL?

By Leonard Adgeron

Mary K. Albertson, a former Business Development Associate at Cytel Corporation in San Diego, became OTL's second biotechnology Licensing Associate on July 27.

Albertson graduated from UC Davis in 1984 with a degree in physiology and went to work at the VA Hospital in San Francisco, where she helped to develop vaccines for bacterial diseases.

After a two-year stint in a lab at Synbiotics Corporation in San Diego, she moved to Cytel in early 1989, where she decided she wanted to "become more involved in business, expand the scope of my job responsibilities, but still stay involved with the science."

Within two years she had made the transition to business development, assessing technologies and assisting with in-licensing negotiations.

Albertson heard of the OTL position last winter at a conference for the Association of University Technology Managers (AUTM) in Florida.

The job interested her, she says, because "I wanted an intense experience in licensing, and OTL was the best place to go because of its reputation, the volume of work, and the science" developed at Stanford.

And if she ever tires of licensing, we have her set to do PR work. ♣

OTL Licenses "Waveguide Synthesis" to Sierra, Crystal

By Eric Grunwald

The Office of Technology Licensing (OTL) has just licensed the "digital waveguide" approach to sound synthesis to Sierra Semiconductor (San Jose, CA) and Crystal Semiconductor (Austin, TX), bringing the number of licensees to four. Licensing Associate Joe Koepnick negotiated the deals for the rights to manufacture and sell integrated circuits incorporating the technology.

Yamaha Corporation of Japan, holder of a world-wide exclusive license to "FM synthesis," the predecessor to the waveguide and OTL's second-largest royalty generator, and Media Vision (Fremont, CA) are also licensed.

The waveguide technology, developed at the Center for Computer Research in Music and Acoustics in 1985 by Associate Professor Julius Smith, synthesizes sound using an algorithm based upon physical models of real instruments in which sound propagates back and forth quasi-repetitively.

As with FM synthesis, waveguide synthesis was the serendipitous result of work on another problem.

The original goal, explains Smith, was "to combine reverberators into larger reverberators without running into stability problems."

"Also, I wanted to be able to feed the output of a large system back into its input without causing the system to become unstable."

Smith, who holds a Ph.D. in electrical engineering
Please see Waveguide, page 2



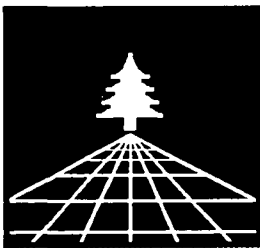
"Waveguide Synthesis" inventor Julius Smith (far right), former OTL director Niels Reimers (second from right) and Licensing Associate Joe Koepnick (front left) in Japan in 1989 negotiating the first waveguide license with Yamaha Corporation. Non-exclusive licenses are also available to North American companies.

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Now Can You Say "\$25.5 million?" page 3
OTL's fiscal year 1991-92 in numbers



Stanford University BRAINSTORM

Eric Grunwald, Editor

BRAINSTORM offers the latest licensing news from Stanford's Office of Technology Licensing (OTL), including licensing deals, inventions, events and policies having an impact on licensing, and other items of interest to the licensing community.

OTL's services are available to any Stanford faculty, students and staff who invent technologies which may benefit the public or be of commercial value.

To find out about a specific technology, or to submit one of your own, contact us at:

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Waveguide

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from Stanford ('83), solved the problem at the end of 1984. "Over Christmas vacation," he recalls, "I took one book, *Classical Network Theory* by Belevitch, to my home town of Memphis.

"By reading the book, thinking about my problem, posing fundamental questions, and puzzling out the answers, I eventually hit upon the waveguide paradigm."

Smith then realized that, unlike in FM synthesis, the numbers produced by the algorithm could be interpreted physically, as for an instrument.

Since that time, Smith and others have developed implementations for bowed string, plucked string, single-reed, and brass instruments as well as for speech synthesis.

The waveguide technology's most immediate applications are in electronic synthesizers and personal computers.

But Koepnick and these companies are also looking forward to what they predict will be the next consumer electronics boom: multi-media.

Koepnick envisions a 4' x 4' x 3" flat panel display on the living room wall, controlled by computer and synthesizer keyboards.

The owner will be able to compose music using a myriad of sounds and also have access to everything from music and movies to banking and groceries. "It would be your video phone and answering machine as well," Koepnick adds.

The multi-media system would also be educational, he says, making education "interactive, so it's fun for kids to learn."

The waveguide would fit perfectly with this concept, believes Koepnick. "Say you call up an elephant on the video encyclopedia and want to hear how it sounds--the waveguide will play it.

"Then by clicking and dragging you can expand or downsize the image, say from an adult to a baby elephant, and the waveguide will adjust the sound accordingly."

IMPORTANT NOTICE

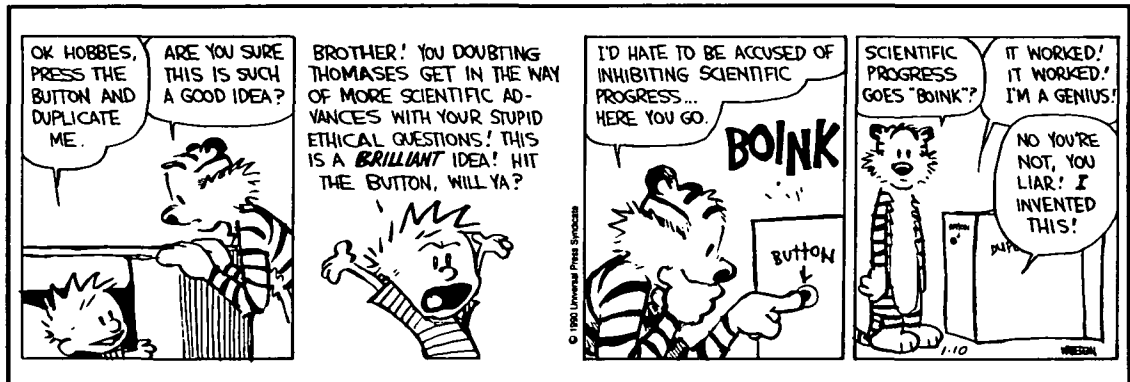
For the past several years, OTL has operated the Software Distribution Center (SDC) as a vehicle for low-cost distribution of software and images to which the University held title. Following a recent evaluation, however, it appears that the SDC is no longer necessary as a mechanism for making software available and that OTL need not be "in the middle of" the traditional exchange of research results.

Researchers are now encouraged to distribute software to their colleagues directly on a royalty-free or cost-reimbursement basis. If the researcher wishes to maintain copyright, OTL will provide a software shrink-wrap license to accompany the distribution. If the volume of distribution to academic colleagues is 20 or more copies per year and the researcher wishes OTL to handle such distribution, we will be happy to assist. OTL will also license commercial entities to distribute software on behalf of Stanford developers or assist developers in distributing software via FTP if desired. All royalty-bearing licenses will continue to be handled by OTL.

Questions about software should be directed to Teresa Owens at 723-0651.

Koepnick and Smith agree that the waveguide will probably not be the exclusive sound synthesis method of the future.

Rather, FM synthesis and sound sampling (playing back prerecorded sounds), which are better for percussion sounds and "bells and whistles," will combine with the waveguide into what Koepnick calls the "ultimate multi-media machine." ♣



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Business School Alumni Scrutinize OTL

GSB "Alumni Consulting Team" Volunteers Time, Expertise

By Eric Grunwald

A volunteer team of Stanford Graduate School of Business (GSB) alumni which usually helps organizations in such areas as the homeless, children's services, the environment, and the arts is analyzing OTL from top to bottom to help it operate more effectively and plan its strategy for the future.

The GSB's Alumni Consulting Team (ACT), a service organization founded in 1987 through which alumni can donate their time and business expertise to Bay Area non-profit and public sector organizations, is sponsoring the project.

According to OTL Director Kathy Ku, the goal of the six- to eight-month project is "to develop a strategic plan for 1997 and beyond and make recommendations on how we can optimize the transfer of technology from the University to the private sector."

The 18-member group studying OTL is comprised of two teams. A "short-term" team is looking to improve OTL's effectiveness within its current charter and structure.

The "long-term" team's charter is "the recommendation of policies and activities which will maximize the revenues to Stanford from intellectual property created there." Their tasks include reviewing OTL's mission and Stanford's policies on intellectual property.

Both teams have interviewed OTL staff, Stanford professors, and corporate licensees and will combine these opinions with their own analyses to develop their recommendations for the office.

The idea to have an ACT group look at OTL came from Nancy Kamei, a previous ACT volunteer and a part-time consultant for OTL. Ku loved the idea, she says, because "I was interested in having some smart, experienced people look at our office."

Ku, Kamei and Dave Plough, another ACT volunteer, thus set about preparing a strategic plan for the ACT project committee.

Once approved by the committee, a

project is placed on a list of potential projects which is mailed out to all GSB alumni. Those projects attracting enough volunteers, get done.

According to Kamei, however, approval was a major—at times even bitter—battle. "On a one to ten scale of controversy, this was a ten!" she says.

Technology transfer and a university setting were two areas where ACT had never done projects before, and Stanford was not seen as being as needy as typical ACT clients.

But Kamei argued that the OTL project would be worthwhile for the University and the community at large, and that it would attract many newcomers to the ACT membership list.

The project ultimately made the list, and the response was "overwhelming," Plough says, adding, "We had to turn away some very qualified people."

According to Anne Rosales, ACT's Executive Director, over 40 alumni signed up for the OTL project, with 30 marking it as their only choice. And as Kamei had predicted, many were first-time ACT volunteers.

Kamei explains this enthusiasm by the fact that "everyone on the team is somehow involved in technology transfer in their daily lives, and they can use that very specialized knowledge to help Stanford."

Allen Rosenberg, a vice president at the Boston Consulting Group and leader of the short-term team, agrees. "It seemed a project where I could add something beyond MBA skills," he says.

Rosenberg says he has enjoyed the project and that the response from professors and licensees has been largely positive, reflecting "a high basic level of satisfaction...and respect for OTL."

As for what OTL has learned from ACT's preliminary reports, Ku says, "Their thinking has pretty much paralleled ours; for example, our need for outreach—things like *Brainstorm*."

-- Editor's note: Sounds to me like they're doing a great job!

The members of the OTL Alumni

Consulting Team are:

Short term team: George Comstock (retired); Brian Kissel (Raychem, now OTL--see below); Steve Hochhauser (Genelabs); Derek Oppen (Sun Microsystems); Allen Rosenberg (Boston Consulting Group); Ron Schilling (Consultant); Pam Versaw (RiboGene).

Long term team: Valeria Akana (Strategic Decisions Group); Danlei Cooperman (McCutcheon, Doyle, Brown and Emerson); Joe Lee (Bain & Co.); Richard Marciano (SRI International); Murry McLachlan (LSI Logic Corp.); Jack O'Reilly (Syntex Corp.); William Rossi (Retired--Chevron); Victor Vamey (Intel); Seth Fearey (Hewlett Packard)

Liasons: Nancy Kamei (Consultant) and Dave Plough (The Beta Group).

Brian Kissel of the ACT group has joined the Office of Technology Licensing as Manager, Planning and Development. A profile will appear in the next issue of *Brainstorm*. ♣

OTL Fiscal Year 1991-92

(Preliminary figures—dollar amounts in millions)

Total Income: ~ \$25.5

Cohen-Boyer DNA patents:

Total Income: \$14.7

New Licenses: 58

New License Income: \$0.83

All Other Technologies:

Total Income: \$10.8

New Licenses: 65

New License Income: \$0.8

OTL Budget: \$1.43

Royalty Distribution to

Schools: \$4.54

Departments.: \$4.54

Inventors: \$4.54

Other Universities: \$6.98

New Inventions: 177

Total Active Inventions: 1050

Licensing to Protect Stanford's Good Name

So you've got this great idea for a Stanford souvenir--a Big Game t-shirt, a mug, maybe even a Stanford condom.

You've had them made. You've got your sales strategy worked out. You're ready to rake in the dough.

But wait! Do you have your trademark license?

Some 200 companies paid Stanford a total of over \$350,000 last year for the rights to sell an estimated \$5-6 million worth of merchandise bearing Stanford's name and logos.

Stanford is one of hundreds of universities around the country that have created programs to trademark and license their names and logos. The largest programs bring in close to \$1 million annually.

But according to Senior Licensing Associate and Director of Emblematic Licensing Jon Sandelin, the primary motivation for a university to license its trademarks isn't money.

The main goal, he says, is to protect the University's name. "The name and logos should reflect the image and reputation you wish your institution to have."

On a more practical level, under U.S. law, if Stanford did not actively protect its trademark rights, it could lose those rights, even to use the marks itself.

Stanford first registered its trademarks in 1979 and charged the Bookstore with administering licenses. The Bookstore hired an outside licensing

agent, and royalty income between 1979 and 1987 totaled around \$15,000.

With the creation of the Centennial logos in 1987, licensing authority was transferred to OTL and a program set up with the help of people at UCLA.

Royalties jumped to over \$100,000 in 1988 and have been growing since, with about 10 new licensees each year.



Have Director Jon Sandelin and Manager Maria Gladfelter of the Emblematic Licensing Program just robbed the Bookstore or what?

Income from trademark licensing goes towards student financial aid, with about 40% going to athletic scholarships.

According to manager Maria Gladfelter, the two main tasks of the program are tracking down infringers and considering applications for licenses.

Most infringers, says Sandelin, are quite innocent—people "such as students, who see an opportunity and don't know there's such a thing as a trademark."

But at the other extreme are large-scale organized crime rings which coun-

terfeit merchandise from a number of schools and professional teams.

Counterfeiters caught using Stanford marks include a ring in the Southeast run by the Hari Krishnas (broken up with the help of the FBI) and a ring at the San Jose Flea Market.

The attraction of counterfeiting is not simply the freedom from royalty payments. It is also the freedom from standards of quality and safety.

Licenses are granted only for items which are safe and from which no liability claim against Stanford could arise.

For that reason, food items, cosmetics, electrical devices, and toys with small parts are typically rejected, though there are occasional exceptions.

As for particular designs, Gladfelter says, "I think we have a more relaxed approach than many programs."

Sandelin agrees. "At Princeton, for example," he says, "the colors have to be exactly the right shade. Here we're not that concerned with color."

Products recently rejected for licenses include an impermanent tattoo, a disposable camera, sun tan lotion, and, yes, a Stanford condom. ♣

Note: OTL licenses Stanford's trademarks for use on commercially sold goods. For use of Stanford's name in a business name, contact the Legal Office, and for use of Stanford's name in TV shows, etc., the Office of Public Affairs.

Office of Technology Licensing

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