



BRAINSTORM

NEWSLETTER OF STANFORD UNIVERSITY'S OFFICE OF TECHNOLOGY LICENSING

Volume 1

Spring 1992

Editor's Welcome

WELCOME! — to the first issue of *BRAINSTORM*, the new quarterly newsletter from Stanford's Office of Technology Licensing (OTL).

BRAINSTORM will include articles about what's happening at OTL, various technologies handled by the office, and anything else we think might pique your interest.

BRAINSTORM is part of an outreach effort initiated by our new director, Kathy Ku, and is intended to let more people inside and outside of Stanford know about OTL and our functions. OTL performs licensing activities in a myriad of areas, from music synthesis to gene cloning to software to the Stanford "S," and *BRAINSTORM* will cover them all.

Our hope is that *BRAINSTORM* will encourage more faculty, students and staff to come to us with their inventions and more potential licensees to inquire about the technologies available from Stanford.

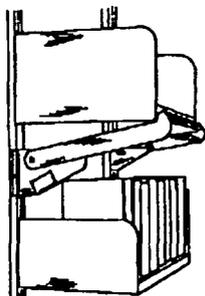
I hope you find *BRAINSTORM* stimulating and enjoyable!

—Eric Grunwald

Closing the Book on Falling Books

Imagine standing in a library during an earthquake: not a pleasant thought! The shelving stacks shake and rock, causing books to literally fly off from all directions. The results: people brained, exits blocked, books damaged or destroyed, and one heck of a mess to clean up.

Now librarians can get ready to close the book on such headaches. Prompted by the damage to Stanford's own libraries from the 1989 Loma Prieta earthquake, Bjarki Hallgrímsson, a graduate student at Stanford's Center for Design Research, has developed the Seismoguard™, an ingenious device for keeping books



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OTL has Dream Year, wakes up with sense of "Déjà Ku"

Despite the hard economic times around the country and at Stanford, the Office of Technology Licensing (OTL) had a "mid-recession year's dream" in fiscal 1990-91, signing over sixty new licenses and bringing in \$25.6 million in royalties and licensing fees from 160 different technologies developed at Stanford.

And as the 1991-92 fiscal year began, OTL moved forward with a sense of "déjà Ku" as former Associate Director Katharine Ku returned from a year in industry to take over as Director of Technology Licensing after OTL founder Niels Reimers resigned last June.

The office's \$25.6 million income for 1990-91 represented almost a doubling of the previous year's income of around \$14 million. Licenses for the "Cohen-Boyer" recombinant DNA patents accounted for \$16.5 million, including a one-time \$4.7 million payment. A total of 17 cases brought in over \$100,000 each and accounted for most of the office's revenues.

Of the total income, \$7.6 million was paid to other institutions sharing licenses with Stanford. Various departments and schools within Stanford received a total of \$8.9 million, and inventors received a total of over \$4.4 million. Finally, \$2.3 million was sent to the Dean of Research for the OTL Research Incentive Fund, a special fund for seeding new research areas.

Biotechnology led the way in new licenses, making up over half of those signed. Other technologies newly licensed included music electronics, superconductors and software.

Ku likes a challenge

Kathy Ku was chosen as OTL's new director from a pool of over 40 highly qualified applicants after a three month search following the resignation last June of Niels

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The OTL Gang: working so hard, we couldn't get them all here.

PHOTO: KEN MILLER

Also in this issue...

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Sex is no game, or is it? page 3
Students could learn a lot from "Sexploration".

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Maybe Prof. Michael Saunders can solve your problems...

"Déjà Ku"

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Reimers, OTL's founder and its director since 1969.

Reimers, who brought the office from \$55,000 in royalty income in its first year to last year's \$25.6 million, says he left to "explore a business opportunity that had been in the back of my mind for some time." He is now working on creating Technology Linkages International, which will engage in technology transactions across international lines on behalf of corporate clients.

Ku began at Stanford in 1979 in the Sponsored Projects Office. She moved to OTL as a licensing associate in 1982, becoming associate director two years later. She also served as acting director for a total of 17 months during Reimers's absences.

Ku says she jumped at the chance to return because "Stanford faces a lot of

challenges in the future, and I thought I could contribute to meeting those challenges. With Stanford's changing environment, it's a chance to look at everything in a fresh way."

After six months as director and having just returned from giving a licensing talk for the World Intellectual Property Organization (WIPO) in New Delhi, India, Ku says of her new job, "I love it! It's a challenge and it's fun."



Reimers, with reason to grin; Ku: feels like she's been here before.

Planning for the future

OTL's immediate future looks promising, with a projected total income for 1991-92 of \$22.6 million and the royalties from new cases expected to increase by almost 150%. Last year the office received 141 new inventions from Stanford faculty, staff and students. Forty (40) new patent applications were filed, and fifteen (15) new patents issued.

Ku says her main task now is "to develop a strategic plan for 1997 and the future." 1997 is when the "Cohen-Boyer" DNA patents expire. Areas in which Ku sees licensing opportunities opening up include diamond synthesis, bioremediation, atomic resolution microscopy and nanotechnology.

OTL Loses Two Associates Porter and Peterson Return to Industry

In the space of two months OTL is losing both of its biotechnology licensing associates to start-up pharmaceutical companies. Senior Associate Amy Porter left in January to become director of technology management and licensing at Ariad Pharmaceuticals in Cambridge, Massachusetts. And Associate Lisa Peterson is leaving March 31 to take a position at Incyte Pharmaceuticals in Palo Alto as director of business development.

Hi ho, Ariad, away!

Amy Porter has joined Dr. Harvey Berger and 14 others at Ariad in looking at novel small molecules and their ability to mediate the function of the human immune system. Berger, former head of the division of Centocor that developed the drug Centoxin, met Porter while negotiating a license with Stanford last year. He became so impressed with her that he called her up and, in her words, "made me an offer I couldn't refuse."

For Porter, who spent two and a half years at OTL, the change fits right into her career plans. She says she's wanted to start a company for some years but always felt it was too financially risky. Now, she says, "I get to go right in and help build the company." Porter will be licensing out Ariad's technology as she did Stanford's at OTL, as well as licensing outside technology into the company. She will also be working at the strategic planning level to secure a technological foundation for the company. "I'm looking forward to learning a lot," she says.

Despite her excitement, though, Porter is sad to be leaving OTL. "I've said this before: this is the nicest group of people I've ever met," she says, adding, "In the way everyone gets along, it's probably the best work environment I've ever been in."

Porter of course returns to the Boston area, where she worked for some years, with her (now famous) horses Tristan and Robin.

Peterson gains "Incyte" (and vice versa)

Lisa Peterson, on the other hand, will be right around the corner in the Stanford Research Park. A rapidly growing firm of 16 people which expects to have a staff of 40 by the end of the year, Incyte is focused around a large family of therapeutic proteins.

"This offer came out of the blue!" Peterson laughs. Hired at OTL in the fall of 1990, she planned to stay for a few years and then move on to such a position as her new one at Incyte.

"I expected that the experience I gained at Stanford would be invaluable," Peterson says, "and it's incredible how much I've learned."

Peterson is excited to be returning to industry. "I like the focus and team spirit of industry, and the start-up atmosphere is thrilling." Peterson will be managing Incyte's intellectual property assets and, like Porter, licensing both into and out from the company.

"They're excited to have me come on board, and I am too," she beams and adds, chuckling, "It just came a lot sooner than I expected."

Sex is no Game, but *Sexploration* is

A technology called "Sexploration?" The mind conjures up visions of the beautiful android in the movie *Blade Runner*, the "orgasmatron" from Woody Allen's *Sleeper*, or an erotic escapade in virtual reality as in the recent Stephen King film, *The Lawnmower Man*. But "Sexploration" is nothing so bizarre as these futuristic fantasies and is based firmly on the reality of today. It is also a prime example of the fact that not everything at OTL is "technology" in the strictest sense.

So what is "Sexploration?" It is an educational board game designed to help young men and women make conscious, informed and responsible decisions about sex, relationships and personal values.

In *Sexploration*, two teams of three or more students move tokens around a game board with six subject categories: contraception, drugs and alcohol, pregnancy, abortion, sexually transmitted diseases and relationships. To move along the board, students answer trivia questions and role play scenarios designed to be informative, thought-provoking and fun.

Designed in 1985 by two Stanford students in conjunction with Stanford's Cowell Student Health Center, the Residential Education office and the Family Planning Program at Emory University in Atlanta, *Sexploration* is not intended either to encourage or

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OTL's services are available to Stanford faculty, students and staff. To discuss an idea or invention you've developed, or to find out more about technologies available for licensing, contact us at:

**Office of Technology Licensing
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phone # (415)-723-0651
fax # (415)-725-7295**

Or simply stop by any time!

INVENTOR SPOTLIGHT

Saunders "optimizes" his time at Stanford

Do you have a problem? Not a small problem, but a really big one? Perhaps Dr. Michael Saunders can help you.

You won't find Professor Saunders in the psychology department, however, and the answers he's likely to give you will have little to do with Sigmund Freud. Dr. Saunders is a Research Professor in the Systems Optimization Laboratory (SOL) in Stanford's operations research department and co-author of the optimization program known as MINOS.

Dr. Saunders, born in Christchurch, New Zealand, first came to Stanford in 1967 as a graduate student in computer science. After finishing his Ph.D. in 1972, he returned to New Zealand to work as a government scientist. "I hated leaving Stanford," Saunders says. "It was a very traumatic experience."

Back in New Zealand he met up with Bruce Murtagh, a fellow New Zealander who had studied optimization in England. Large-scale linear programming was already a well-established tool, but the two decided to make the leap to large-scale

nonlinear, and MINOS was born. Saunders did the main work on MINOS two years later, back at Stanford as a research associate.

MINOS (Modular In-core Nonlinear Optimization System) is now used to solve large-scale optimization problems having thousands or even tens of



Michael Saunders with computer, wife and daughter (upper right)

thousands of equations and variables. Over 800 copies of MINOS have been distributed to universities, companies and other organizations world-wide, and thousands more are used as "black boxes" inside a modeling system called GAMS.

After two more years in New Zealand distributing MINOS, Saunders returned to Stanford for good in 1979 as a senior research associate, joining Walter Murray, Philip Gill and Margaret Wright in SOL in what came to be known as the "Gang of Four."

Since then, Saunders has spent his time continually reworking MINOS and developing other optimization software such as LSSOL and NPSOL (also distributed by the Software Distribution Center at OTL) with the Gang of Four. Much of the software revenue has gone back into a research fund to support their work.

Saunders finished MINOS 5.0 in 1983, at which time he was still copying and distributing the tapes himself. "It was getting harder and harder to keep up," he remembers. "It was taking up far too much time."

OTL then agreed to take over the licensing and distribution of MINOS. "OTL has been very, very helpful," Saunders says. "They made it feasible to distribute much more widely," adding that OTL did work on commercial licensing that he couldn't have done himself.

Despite a lack of competition and any significant complaints, Saunders, who became a research professor in 1987, isn't at all complacent. "I lie awake at night," he says, "worrying that thousands of people are using MINOS, and there's really no guarantee it will solve all of their problems." He says his main task now is to improve the reliability and efficiency of his optimization programs.

But Saunders has another major commitment now: 2-year-old daughter Tania Michelle. "It was fairly late in the day," Saunders chuckles, "but it was much to my amazement and delight." The photos of Tania and Prudence, his wife of 24 years, covering the wall above his desk attest to that. "I don't think I'll need OTL's help on this one," Saunders laughs. "Tania seemed optimal from day one."

PHOTO: ERIC GRUNWALD

Seismoguard

Continued from page 1

on their shelves during an earthquake.

The **Seismoguard™** fits on existing shelves and is designed to be completely unobtrusive for normal book access. But when an earthquake hits, the shaking triggers the **Seismoguard™** automatically, causing it to fall down in front of the books and keep them where they belong.

The **Seismoguard™** got an overwhelmingly positive response from library administrators around the state during a marketing study last summer and again at the California Library Association Convention in November.

OTL is now seeking licensees to commercialize the **Seismoguard™**. Potential markets include libraries, chemical laboratories and offices with open files. A demonstration tape is available for viewing, and a prototype is currently on display at Stanford's Green Library.

For more information, contact Luis Mejia or Eric Grunwald at OTL.

Sexploration

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discourage sexual activity.

Rather, the values underlying the game, according to one inventor, are "being thoughtful about your own decisions, taking personal responsibility about your behavior and communicating openly with a partner."

Designed originally for a college residence setting, the game could be adapted for different settings, for other age groups, or for groups who object to some subjects.

Shortly after its inception, *Sexploration* was shown to college administrators from across the United States, and all expressed interest in using it in their student health programs.

Stanford holds the copyright to *Sexploration*, but the game is currently unlicensed and is not being marketed. OTL is now seeking a licensee to commercialize *Sexploration*. If interested, contact Joe Koepnick or Eric Grunwald at OTL.

ACKNOWLEDGEMENTS

It's time to acknowledge, in the OTL manner,

all the people who've helped me publish this banter.

First thanks to Jan, for her design expertise,

who gave me advice and didn't call it a "piece".

And thanks go to Kathy, for giving the chance

and urging me often to include song and dance.

To Joe and Luis, for donating my hours

(if they knew just how many, I'd be grown over with flowers).

And of course thanks to Sally, whose constant support undoubtedly helped me not to abort.

To Amy, Lisa and Michael, thanks for your time;

I hope it was fun (if not sublime).

And last but not least, thank you, gracious reader,

For enduring my folly and not feeding the shredder. -- EG

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