

Students: The Gathering

By Henri Tetrault



Every afternoon a cluster of students crowds around two small folding tables at Out of Time Comics, involved in a Penn tradition of lightning wit and sophisticated skill. These are not young, tweed-clad chaps engaging in a quiet game of chess, however. They are playing a new card game with an international following invented by a former Penn mathematics professor.

“MAGIC: The Gathering,” which combines role playing with card trading, has sold more than 2 billion cards world wide since it was created in 1993 by Richard Garfield, a former University of Pennsylvania mathematics professor.



Photographs by IVIATK Get VIII

Hundreds of MAGIC cards exist, some quite rare, and players trade them to strengthen their decks.

Garfield created MAGIC in 1993 for Wizards of the Coast (W. O. T. C.), a small, young Seattle company, which specializes in role-playing games. Garfield, here at Penn during that time, invented the concept and did most of the research and development of MAGIC with the help of a group of Penn students. Dubbed by the Seattle folks as the “East Coasters,” they acted as play testers, and later many of them, including Garfield, moved to Seattle to continue their gaming careers.

MAGIC was greeted by instant worldwide success, elevating W. O. T. C. to a force to be reckoned within the gaming business. Founded in 1990, W.O.T.C. since then has established international offices in the United Kingdom and Belgium and has grown to

more than 300 employees. MAGIC, its most successful product at \$9 dollars a pack, has brought in a substantial amount of revenue.

Part of that revenue comes from players at Penn. Every afternoon a number of students make their way from their last class to the comic-book store at Walnut near 38th Street. When the MAGIC players enter, foldable chairs and tables are pulled from the corner, long boxes of MAGIC cards are pulled from backpacks, cards are traded and the games begin. Someone takes orders for a snack run — including Gatorades, and bottled water — as these athletes of the mind work up an appetite. Some 30 students filter in and out of the busy comic store every week.

One busy afternoon, none of these steeped-in-strategy players was willing to reveal his name.

Some of the players said they have been playing since the game appeared on the market in 1993; some just picked up the game a few weeks ago. One young man, also travel-



MAGIC players gather at Out of Time Comics for afternoon pick-up games.

ing incognito, said he is semi-pro and competes in international tournaments that have prizes of up to \$20,000. W. O. T. C. sponsors the tournaments.

The company organized a world-wide pro tour in 1996 that popularized the game to a wider audience. The tournaments have elevated the cerebral MAGIC to the kind of competitive sport that requires practice.

The game is played with two or more “wizards,” each armed with a deck of cards. The wizards duel for control of a magical plane. The tools of competition include evil spells, fantastic creatures, spiritual levels and enchanted lands — all at power levels designated by the cards. The cards themselves are bought, traded and collected much like baseball cards, allowing a player to create unique decks with different themes and strategies.

MAGIC uses hundreds of cards, each one a small work of art because of the intricate, comic-book-like graphics printed on the top half of the card. Printed below the graphics are the rules pertaining to that particular card, and numbers representing its powers in different situations.

MAGIC is a complex yet simply organized game that can be picked up by beginners within half an hour. But the strategic planning takes practice and skill, a quality that attracts strategy-game masters.

What makes the game most exciting is that no two duels are the same due to the immense numbers of cards, the ability to create a deck or pick one randomly, and the opportunity to play the game in different ways, said Out of Time’s assistant manager and avid MAGIC player, D.J. He preferred to be identified only by his initials and was the only player in the shy group who was bold enough to speak about the game.

The meeting in the comic store is just one of many in the area where MAGIC fans meet to test their decks

and have a good time. Pick-up games are common at CHATS on Thursday afternoons, and at Out of Time’s second location on 19th Street weekend afternoons. The 19th Street store hosted a tournament Sunday.

The players welcome newcomers and a simplified version of MAGIC called PORTAL makes learning the game easier for beginners.

Center Designs New Scientific Method

By Libby Rosof



“It’s an engineering approach to biology.”

— Chris Overton

Picture an attic filled with stuff you’re convinced you will need some day. Now picture a mountain range of scientific data piled up in pretty much the same way most folks stuff their attics.

For the last 20 years, scientific data has been piling up in much that way. And in the last six years, with the advent of the Human Genome Project (HGP), the volume of data pouring out of labs has increased exponentially, overwhelming traditional methods of keeping order.

Critical information and discoveries biologists are eager to build on are buried in databases they cannot negotiate.

Help is here. Here at Penn. It’s interdisciplinary and it’s a new center, the Center for Bioinformatics.

The center grew out of work underway among geneticist Chris Overton; computer whizzes Susan Davidson, Peter Buneman and Val Tannen; and biologist Warren Ewens. They were creating programs to help scientists find and manage information, and they were running a seminar series that was attracting people from beyond Penn’s ivied walls.

Some of the programs they were designing enable databases and computers to communicate with one another. Some enable scientists to visualize biological structures by transforming data normally expressed in long strings of characters into still and moving pictures. Some programs create storage systems, and some analyze or allow manipulation of data.

But figuring out which kinds of databases needed accessing and which kinds of data needed visualizing requires more than just computer experts.

“We need people who can address the biological problems — what information is

needed, how to generate that information, and people to address the computational problems,” says Overton, director of the new center. They also need engineers to design robotics systems for automated experiments; they need statisticians to determine how data needs to be crunched; they need chemical engineers, physicists, map-makers.

They need to attract more people to their work to fill all those roles. So the group felt it was important to formalize their long-standing collaboration.

“There needs to be synergy with what we’re doing here and other big pools of experts in biological sciences,” says Davidson, co-director for the center. “The center will enable us to attract people.” The center plans to recruit three new faculty members and associated staff persons within the next three

years over and above the three core faculty and seven associated faculty, 14 programmers, grad students, post-docs and support personnel currently there.

Even before the center’s creation, the informal bioinformatics group had started attracting people. People from other institutions and pharmaceutical companies began coming to the seminar series, called the Penn Bioinformatics Forum. The seminars attracted people from as far away as Washington. At the seminars, university and industry investigators come together to exchange ideas and discuss research issues of mutual concern.

“We’re the only one of the few places on the East Coast doing bioinformatics in an academic setting,” Overton says. Only a handful of academic groups dedicated to bioinformatics exist.

And although Penn is not the only place in the country doing this kind of research, it

is unique in several ways.

“There are isolated pockets of excellence in particular departments, but very few formal programs around the country,” Overton says.

Penn’s program is anything but isolated. It reaches across the University to include Penn’s schools of Medicine, Engineering and Applied Science, and Arts and Sciences.

“At Penn we have recognized the interdisciplinary character of bioinformatics,” Overton says. “Our center will permit us to take advantage of the combined talents and contributions of many specialists — from biomedical researchers to computer scientists to mathematicians.”

The center’s base of operations is the Institute for Medicine and Engineering

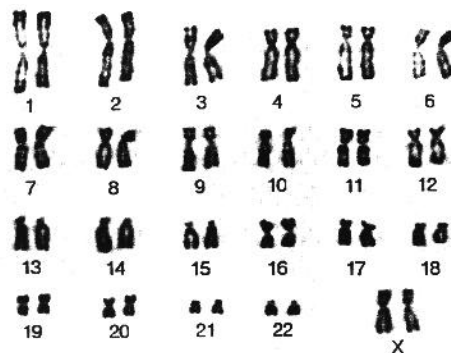
(IME), which is connected to the three schools. The small work-group that eventually formed the center received long-standing support, informally, from the Institute for Research in Cognitive Science.

“The center is a superb example of interschool discov-

ery, education and application,” says Peter F. Davies, IME director and professor of pathology and laboratory medicine.

Penn’s program is also unique because it is formal, and includes undergraduate and graduate studies: Starting this fall, Penn will offer a B.S. degree through the Schools of Arts and Sciences and Engineering, as well as an M.S. of biotechnology with a track in computational biology and bioinformatics. (The M.S., without any advertising, already has seven enrolled this year, Davidson says.) Penn is also one of the few schools to offer doctoral and post-doctoral programs in computational biology.

“We’re getting a lot of biologists coming back to fill in with courses in bioinformat-



Chromosomes of a normal female

ics," she says. "Pharmaceuticals and the biotech industry are looking for people with this training."

The link with industry is one of the unique aspects of Penn's program. "A lot of good bioinformatics work is going on in industry, for example at SmithKline Beecham. The center aims to train future bioinformatics specialists through practical internships and fellowships.

"We recognize the potential for bioinformatics to influence clinical medicine," says Dr. William N. Kelley, dean of the School of Medicine and CEO of the Health System.

In part, that influence relates directly to HGP, which has produced a detailed map of human chromosomes and will create a reference sequence for the human genome by the year 2005. In mapping the human genome, scientists have been locating markers for diseases.

"Things close together [in the DNA] tend to be inherited together more than things that are far apart," Overton says. "Marker-location information from the HGP has enormously accelerated the ability to do disease gene-hunting."

Bioinformatics creates an infrastructure to help integrate the DNA information coming out of labs across the country. The data comes from databases — from small ones in people's labs to international ones.

"Everyone stores things differently, using different formats and languages," Davidson says. A researcher who asks a question that requires information stored in many databases must have a way to get the computers to talk to each other. Investigators at the center are already working with funds from federal and corporate grants to create new computer programs to improve the compatibility of the nearly 400 biology databases already available.

"All of this data management, inventorying, managing work flow and process — those are management techniques businesses use, adapted into the genome project," Overton says. "It's bookkeeping on a big scale."

All different kinds of projects are being converted to the genomic style of multiple

New Chef Whips up Changes



Perhaps he did not conduct a scholarly study, but the faculty club's new executive chef knows what items on the menu will always sell.

"It's not very scientific, but it's reliable — generally the first two entrees on the menu are the most popular," says our new culinary expert, Jamie Campbell (pictured left), explaining why the crab cakes have been a perennial favorite.

So he's shaking up the tradition.

"I think it's a time for a change in favorites, so we've introduced Sole and Lox Napoleon, an elegant version of our traditional steak sandwich, and vegetarian canolis along side the traditional favorites," he says. The crab cakes are still there, but other foods are taking turns at the top of the menu.

Campbell's a modern chef in more ways than new, hip menu items. He usually begins his day at the computer, planning daily specials and seasonal menus. And he's hoping diners share their opinions of the fare over e-mail at campbell@dining1.dining.upenn.edu

To showcase the Faculty Club, Campbell holds special events like the football brunches, tomorrow's Wine Tasting Dinner and the Oct. 29 Halloween Buffet.

He also designs custom menus for events held in the club's meeting facilities.

Members can practically give up their kitchens Monday through Friday, with the complimentary coffee break from 8 to 11 a.m., the variety of luncheon options, and the new light dinner menu Monday through Friday.

"I'm thrilled to be cooking for such a prestigious institution," says Campbell, who comes to Penn from the White Manor Country Club. Before that he cooked at Scampi's, in Clifton Heights, and at the Germantown Cricket Club.

For membership information, call 898-4618 or visit the home page at <http://www.upenn.edu/faculty-club>

experiments at a time, Overton says. The need for data management and automated laboratory techniques is enormous. "It's an engineering approach to biology."

These new systems will not wipe out old-fashioned, hypothesis-driven research. They will instead help support that kind of research, Overton says. "Bioinformatics will add to the knowledge base so scientists can put out their research faster."

"Bioinformatics is the future of biology," Davidson says.

The Web site for the Center for Bioinformatics is at <http://cbl.humgen.upenn.edu/cbiweb>

A Web page schedule for the Penn Bioinformatics Forum is <http://www.pcbi.upenn.edu/cbiweb/seminars.htm> The next seminar with a firm date is in January.

To address questions and requests for placement on a seminar-update e-mailing list, write to the human being at pbf@www.pcbi.upenn.edu

WELL SAID

The following quotes from Penn professors and others appeared in publications across the country and around the world.

"I'm convinced that most American men—and increasingly women—can build a house. Or they think they can."

—**Włod Rybczynski**, professor of architecture, in an article about the popularity of home enhancement and remodeling (Newsday, Saturday, Sept. 6).

"It's the same thing you get in retailing when you go to New York and you walk down one street and there's a whole block of computer stores."

—**Janet Pack**, professor of public policy and management, in an article on whether SmithKline Beecham's new office building has the potential to attract other drug companies to Philadelphia (Philadelphia Daily News, Tuesday, Sept. 9).

"Traditionally, all you needed to do was put the shoes of your husband outside the door of your house, and he was gone."

—**Peggy Reeves Sanday**, professor of anthropology, quoted on divorce in the style of the matrilineal Minangkabau culture of Indonesia in a story about a University Museum show featuring her findings on the culture (Philadelphia Inquirer, Monday, Sept. 15).

"At the moment, [SAP owns] the market."

—**Lyle H. Ungar**, professor of computer and information sciences, on the giant business-software maker that is locating its North and South American headquarters in Newtown Square (Philadelphia Inquirer, Monday, Sept. 15).

"With these statistics, for a company to leave a drug on the market, they are asking for class-action suits in the billions of dollars."

—**Dr. Alan Hillman**, director of the Center for Health Policy, on the withdrawal from the market of two popular diet drugs, fenfluramine and dexfenfluramine by their manufacturers (New York Times, Tuesday, Sept. 16).

"We prize cheese, which is rotted milk and smells that way. Fish sauce, which is rotted fish, is prized in Southeast Asia."

—**Paul Rozin**, professor of psychology, in a commentary piece on how different cultures view the acceptability of different foods (New York Times, Sunday, Sept. 14).

"You're not going to see a lawyer from Delaware County come back, but we will draw the small manufacturing firm or the small service firm back into the city to employ city residents."

—**Robert Inman**, professor of finance and economics, on the effect of dropping city wage taxes (Philadelphia Inquirer, Sunday, Sept. 21).

"It has nothing to do with criminal sexual behavior. Something that happened to him in his childhood made him feel good about women's underwear. ... As a man, it can become the focus of sexual fantasy or a way to feel more secure in high-stress situations."

—**William Stayton**, adjunct professor in the Graduate School of Education, on Marv Albert's wearing women's lingerie (Philadelphia Daily News, Wednesday, Sept. 24).

"You must have a laser-beam focus and concentration."

—**Peter Kuriloff**, professor of education, on college dropouts who succeed anyway in the world of computers to become billionaires (Philadelphia Daily News, Thurs., Sept. 25).

"They are so good they just can't wait to get started."

—**Michael Useem**, professor of sociology and management, comparing college dropouts-turned business-titans to top high school basketball players who skip college and go straight to the NBA (Philadelphia Daily News, Thurs., Sept. 25).

— assembled by Sunil Kumar

Chaplain Moves to Central Campus Location

To introduce the Penn family to his new office, the Rev. William Gipson (pictured center) held an open house, hosting students, staff, and administrators, including President Judith Rodin (right) and Provost Stanley Chodorow (left). More than 75 guests dropped in to celebrate Gipson's move to a more central, more visible spot. He moved from the Quad dormitories to larger offices in Locust House, 3643 Locust Walk, where he shares the building with the Penn Womens Center.

