New electronics shine in out-of-home media

The days when out-of-home media meant only painted posters are coming to an end. Fiber optics, three dimensional holography and computer graphics are the cutting edge of a revolution that is getting ready to transform outdoor advertising.

The year is 2021. The scene: a very rainy Los Angeles. The image: a skyscraper high illuminated flashing billboard for Coca-Cola.

The movie in which these depictions are presented, *Blade Runner*, previewed a depressing future for city living. But the vision of how outdoor advertising may be utilized in coming years excited many people in the out-of-home business.

Those huge flashing signs, particularly one nearly as large as the Coke sign showing a Japanese woman eating a delicacy, may be impractical visions of the future of outdoor, but the technology on which they are based is emerging today.

In fact, the new electronic media are about to transform the face of outdoor.

One of those innovations has been around for a while and used on a fairly small scale, the projection of three dimensional images with lasers, called holography. The second is also an expansion of an existing technology, fiber optics.

Of the two, fiber optics is the closest to large scale utilization. Large outdoor fiber optic displays are being used at Disney World in Orlando, Florida, and in Japan. Fiber optics are also being used by American Bus Shelter, Santa Anna, California, but at this point, as a border around illuminated panels.

Fiber optic advancement in outdoor displays and advertising is being developed by Gekee Fiber Optics and marketed by a subsidiary of that company, Intech Lighting Systems, Palo Alto, California. Brett Kingstone, vp at Geekee, explained how the system works and is being used.

A cable of acrylic fibers is spread across a panel so that at the small end a 35mm slide can be projected in color to a size of 50 by 50 feet.

Cost is a key concern for plant operators and advertisers. Keystone said the fiber optic system costs 25% more than a similar system in neon. But from there the costs diminish and the advantages accumulate. The fiber optic system is 80% more energy efficient than neon, and maintenance costs are 10% of those of neon.

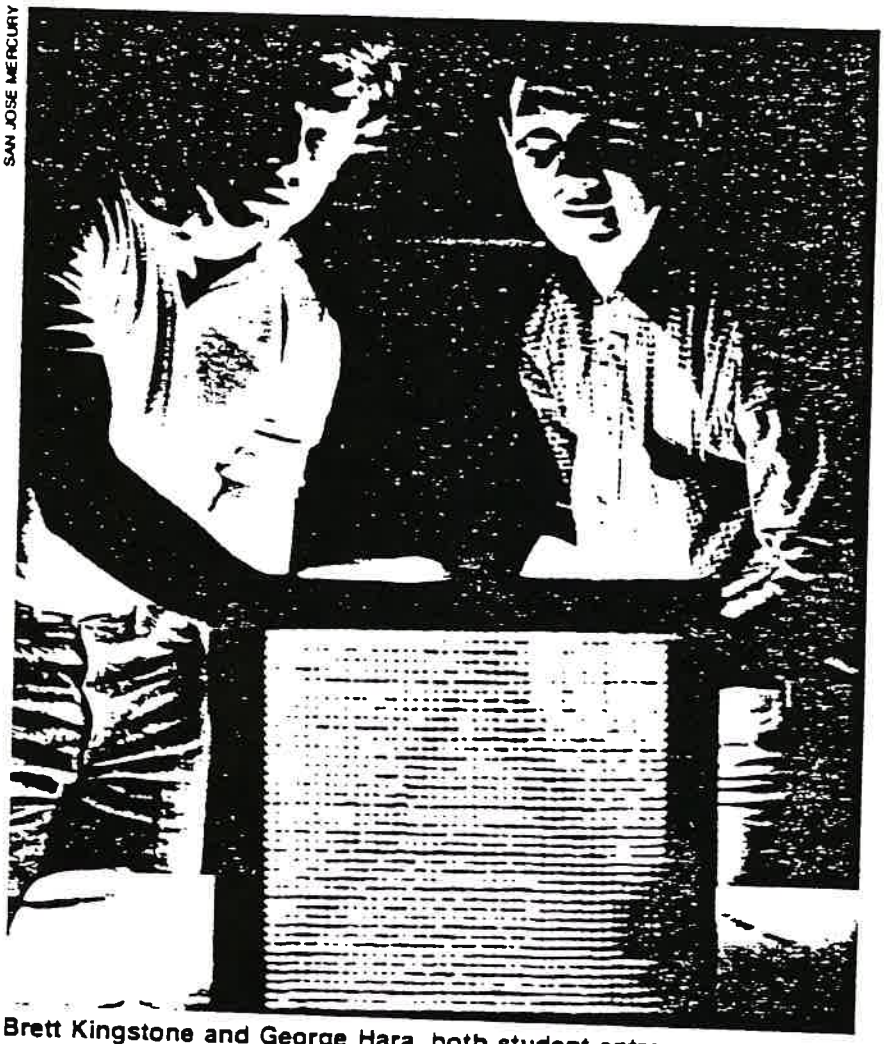
"With fiber optics, you can have a continuous stream of color. You can easily have a changing pattern of color. It gives people a reason to continue to look at it," he said.

"We can manufacture a large coherent screen up to 50 by 50 feet, but it is much more practical to use a 20 by 20 foot screen. That produces a fluid, much more life-like image than those produced by computer graphics. What is put on the screen with fiber optics is under greater control of the art director."

In its present state of development, fiber optics is restricted to single, static images, but its capability to use moving pictures is under development. "We now have the ability to produce moving pictures with fiber optics but there are some bugs in it. There is a tendency to loose definition in the corners. We want it to be a maintenance-free, easy to operate system, and that is about a year and a half away," Kingstone said.

◀ Computer graphics and moving news crawl are combined in new airport displays created by Spectrumedia Network.

SAN JOSE MERCURY



Brett Kingstone and George Hara, both student entrepreneurs, are developing fiber optics as an outdoor display medium in the United States.

In addition to its contract with Disney World, the company is overseeing installation of displays in Fantasy World in Japan, and is in discussion with the Soviet Union for installation and use in that nation.

Tony Mollicone, president of American Bus Shelter, Santa Anna, California, is most enthusiastic about his first demonstration fiber optic panel. The panel is blank, but surrounded with a two inch fiber optic border, and is being used as a demonstration device for advertisers. "Mechanically, it operates terrifically," Mollicone said.

"I think it has a place, but it's going to take some advertiser to figure out just how to use it. I believe it's what outdoor must become. You've got to give it a function, and it's also got to be exciting."

Mollicone said that initially he was afraid the effect of the fiber optic border would be garish. Consequently, he installed it at his lowest traffic location. But on installation, he said he discovered its "effect is subtle. So I moved it to my highest traffic location."

While it's definitely not syndicated research, Mollicone's own surveys of driver reaction to the panel in the evening, is that five out of seven drivers do a double take as they pass the fiber optic display.

"I don't think I'll install fiber optics in all our units," he said, "but definitely in some of them. I'll offer it as an option to advertisers. Quite possibly one of them will want to use fiber optics to draw greater attention to the

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brand name by putting it in fiber optic light," Mollicone added.

While the East Coast has yet to see the fiber optic display, the 21 year-old Kingstone says he is working on the placement of a sign in New York's Times Square, which would give the Spectacolor display some keen competition.

In the more distant future lies the promise of three-dimensional out-of-home displays of considerable scale. Small scale three-dimensional holographic displays have been used indoors in such locations as Grand Central Station in New York. But the technology for creating such displays is still cumbersome, and the color potential has yet to be developed.

But distant as large scale holographic outdoor displays may seem, Mike Turner, vp, director of community affairs at Gannett Outdoor in Phoenix, sees it is an eventuality in outdoor this decade. Work on prototypes for large scale holograph projection is currently being done at the Massachusetts Institute of Technology's advanced visual center.

Turner envisions a system in which the projection units for 3-D will be programed by satellite. "Theoretically it can be done, but at present the process is cost prohibitive.

"The way it would work, outdoor holograms could be set up as a network, to be programed by satellite. Changing art would be a simple matter. You could have a sophisticated message, with animation where possible."

A less dramatic innovation that is in keeping with outdoor as it is now used, is a system for computerized spray painting of posters. "We've done some work on computer spray painting. What is required is a very sophisticated tracking machine for the spraying process. That development is three or four years away," Turner estimates.

A more immediate concern he is working on is the environmental issue as it relates to sign location and area upkeep. "What we're having to do is go into the landscaping business." As a result of gradual public pressure and a conglomeration of local sign ordinances, Turner says the outdoor industry must deal with the negative visual aspects of outdoor site locations and postings.

"Previous efforts to deal with the problem were done in a haphazard way." More coordinated industry efforts are needed to upgrade the image of outdoor in the public mind if the industry isn't to suffer at the hands of local legislators and boards, Turner believes.

In the more immediate future are some developments from the 3M National Advertising Company. The Bedford Park, Ill. company has developed back-lighted 14' by 49' panels, a reflective high-intensity Scotchlite back-

"Outdoor holograms could be set up as a network and programed by satellite."

ing that reflectively lights 8-sheet posters, and a computer generated four-color printing process that can reproduce any standard camera-sized transparencies or prints.

3M's backlighted panels are the result of a continuous four-color screen printing process. John W. Verre, in advertising and sales promotion at 3M notes, "Because of this one-time run, colors are evenly spread across the face, creating a smooth, equal appearance over the entire length and width of the face. The process has eliminated the time involved, and the distracting appearance associated with seamed backlite displays.

"The display consists of a translucent polyvinyl choloride, on which an advertising design is screen-printed in a four color process, stretched and mounted on a lightbox, and backlit with high intensity captured light. Brightness is unaffected by nearby signs or other light sources."

The use of Scotchlight in non-illuminated locations provides visibility from reflected light. Tiny glass beads imbedded beneath the smooth transparent surface of the sheeting reflect light from approaching vehicles. High intensity Scotchlite, Verre said, is at least three and one half times brighter than engineer grade of equivalant signs. High intensity sheeting has an expected lifetime of up to 40 times that of posted paper applications.

Currently, 3M is testing the Scotchlite applications in Philadelphia and surrounding New Jersey markets.

The 3M computer-generated graphics process, called Technigraphics, reads transparencies with an optical scanner that feeds color density data to a computer. The computer then directs a four color jet-spray system to reproduce the art exactly in ratios of 24,36,48, or 72 times the original size. 3M National is using this process to replace a portion of their high-styled paint work on 14' by 48' and 20' by 60' bulletins.

Verre said, in the not-so-distant future for Technographics, a satellite link-up of an account could simultaneously transmit its outdoor design to markets across the country to be produced for flash paint, poster or rotary programs.

Less dramatic and futuristic is a relatively simple idea developed by media neophites Andrew Pakula and Brain Connolly the combination of two computerized lightboards for use in airports and other arenas where people gather. The system unites a crawling electronic readout of news from United Press with an advertiser's computerized graphics.

This idea, offered as Spectrumedia Network, was unveiled late in the fourth quarter as installed at LaGuardia airport in New York. The bottom half of the unit is a two and a half by ten foot board that produces logos and slogans in 16 combinations of red, blue, green and yellow. It accommodates a cycle of 20 ads.

Copy changes can be made in 48 hours within existing frames. For new frames, a week is needed.

Pakula and Connolly project a cpm of $1.60. They contend that "people wait longer in an airport than in any other transit terminal." The electronic boards, 40 in. all are placed in ticket, baggage and boarding areas of the airport.

Advertisers who are intrigued enough to try this new out-of-home medium include American Express' card division, Dreyfus Financial Ser-

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Small Business

Gekee Fiberoptics of Palo Alto has helped light up the lives of two young entrepreneurs

Page 3D

The Mercury

Serving Northern California Since 1851

Business

Small Business

These two entrepreneurs

have seen the light

"I know a lot of MBAs. They don't care about quality. They'll do anything to make money."

— George Hara

Hara and Kingstone see a bright future for fiber optics firm

By Brad Crystal
Staff Writer

Five years ago George Hara was looking for a better way to illuminate the inside compartments of his electric train set.

He needed something that would conduct light with equal intensity throughout the interior and came upon a flashy idea: Why not try flexible fiber optics, thin fiberglass threads that can transmit light over great distances with little signal loss?

It worked. The fiber optic strands conducted the light more consistently and brilliantly than anything he had used before. Hara and younger brother Kent, who helped develop the concept, knew they were onto something big.

Fiber optics was then being touted in the scientific community as a more streamlined way of carrying telephone voice signals. But Hara's illuminated train led him in a different direction. He hypothesized that a fiber optics dot matrix might have a host of other applications, from thin-wall TV screens to scoreboards, from glittering signs to radar scopes. He has patented the process in Japan, and a patent is pending in the United States.

The Stanford connection

Five thousand miles away, at about the same time as Hara was tinkering with the train in his native Osaka, Japan, Brett Kingstone was getting ready to enter Stanford University, where he would soon acquire a reputation as a student entrepreneur extraordinaire.

A few years later, their paths crossed at Stanford and together they formed a fiber optics company. Kent Hara later joined his brother and Kingstone as an equal partner.

That company is Gekee Fiberoptics of Palo Alto, established last August. The Gekee slogan is "It is time for a revolution." The company's three partners believe that their product may one day replace the neon light.

Starting out with only $25,000 and 2,000 square feet of factory space, Gekee has since grossed more than $500,000 in sales and won three contracts from Disney productions and one from Japan's largest office system and equipment manufacturer.

The company is profitable, but Hara and Kingstone won't disclose exact figures.

One of the Disney projects is a computer display panel that will appear in the Experimental Prototype Community of Tomorrow (EPCOT) scheduled to open at Disneyworld in Orlando, Fla., Oct 1.

What makes fiber optics special?

The advantages over the more traditional neon lighting technique, according to Hara, include energy efficiency (fiber optics consume up to 70 percent less electricity) and durability (fiber optics never need replacing). Moreover, by attaching a color wheel, fiber optics yield an unlimited array of changing colors.

The only drawback is the initial cost. A fiber optics sign is 20 to 30 percent more expensive than an equivalent neon sign, according to Kingstone. But that gap may be narrowing — "We're coming close to being price competitive with neon," he says.

Gekee's goal

Gekee's long-term goal is to create a thin-wall fiber optics screen of very high resolution that would make computers more portable than current machines, which use bulky cathode ray tubes.

"By using fiber optics we believe we can design a much thinner, more efficient and visually appealing computer screen . . .that will also greatly reduce the eyestrain caused by a cathode ray tube," Kingstone explains.

A shared belief

More important, they say, is their shared belief that business should ultimately serve the public interest.

"We came up with the dream of starting our own company and making it successful," says Kingstone. "Hopefully, we can use our success to improve society."

But he does not play down the need to make money, explaining, "I can't change problems without economic power behind me."

Hara concurs. "Many people," he says, "believe the essence of the corporation is to maximize profit. This is not true. In my view, the objective is to contribute to society by fostering the welfare of employees and making customers happy."

While Kingstone and Hara are proud of their humanistic attitude toward profit-making, their idealism did not sit well with the venture capital firms from whom they were seeking money.

When the twain met

Kingstone and Hara met just a year and half ago while taking an international finance class at Stanford.

By chance they were assigned to the same four-person study group, and it did not take long before they found a common bond — their philosophical approach to business.

"I had no intention to do business here until I met Brett," says Hara, who claims that it would have been "much easier to start a business in my own country."

Hara says he knew right away that he and Kingstone would be compatible business partners.

Kingstone and Hara enjoy the idea of bringing an innovative idea to fruition, without the constraints of a large corporation.

For Kingstone, a 22-year-old business wunderkind and native Long Island New Yorker, entrepreneurship has been a way of life since age 9, when he sold more copies of The Daily News than any newsboy in the state.

He helped pay his way through Stanford by creating Kingstone Bedding Warehouse, a retail outlet for electrical adjustable beds and waterbeds.

Another Kingstone venture was the 159-page paperback he authored, entitled "The Student Entrepreneurs Guide." He describes it as a how-to book designed to "inspire and inform."

Kingstone majored in economics and political science at Stanford and was accepted last year in the school's combined graduate program in business and law. But he turned down the offer, deciding that he could learn more from the practical experience of running his own company.

If Kingstone's forte is marketing, the 29-year-old Hara's is technical know-how. The soft-spoken Hara's academic background includes a master's in electrical engineering from Stanford.

Says Kingstone, "We might be at the cutting edge of something new and then again may be not, but I'm having a good time."