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High-tech declaration of independence

Computer system lets disabled run homes

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Tribune writer

When Valley resident Elizabeth Jimenez was stricken with multiple sclerosis in 1984, she lost the use of her hands and legs and became totally dependent on others to perform even the most simple tasks.

When her personal-care assistant left her home each afternoon, she would be seated in front of the television set and would have to watch the same channel until her mother came home in the evening.

During winter months, when the sun went down early, she would sit in the dark until her mom arrived. On days when she knew a visitor would be over, the door had to be left unlocked and open.

"Sometimes I felt I was a plant," she said. "I was rooted to one place."

For eight long years, Jimenez lived in a hermitlike state. But her life changed last February when some friends helped her buy and install an experimental computer system — developed by a Tempe firm — that enables the disabled to take better control of their lives.

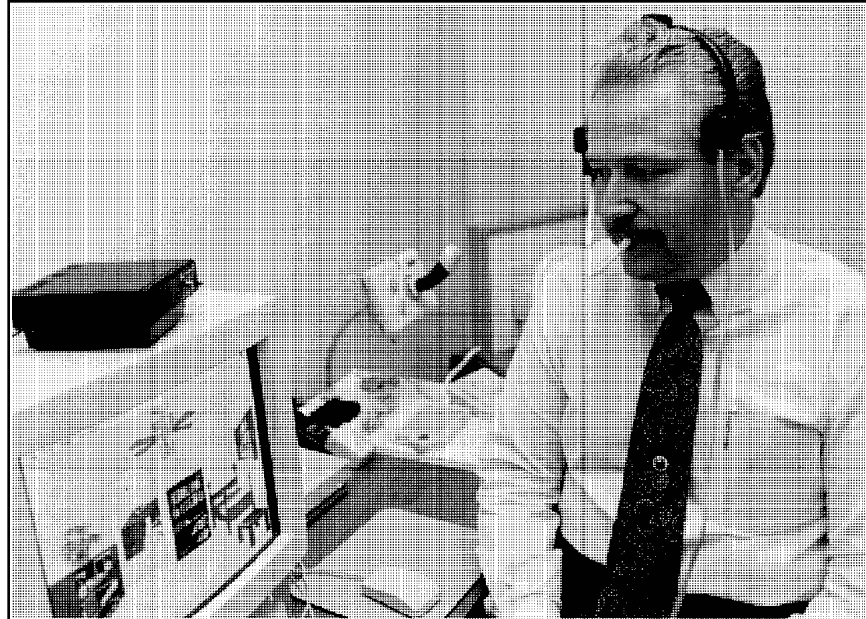
Developed by Safko International Inc. of Tempe, the system involves computer software and hardware that allow physically impaired people to turn on lights, unlock doors, read, write, answer the telephone, turn on televisions and stereos, control the air-conditioning and more — all without lifting a hand.

It's called SenSei, a Japanese term of respect meaning master or teacher. However, the system is an all-American product developed by the Tempe firm's president, Lon S. Safko, a computer afficionado who designed the software to work with an Apple Macintosh. The only difference is the operator uses a headset instead of a hand-operated "mouse" to control the position of the cursor and gain access to the computer.

By aiming the headset at the monitor screen, the operator can direct the cursor to objects that appear on a graphic display. Then, by puffing into a small tube connected to the headset, the operator can issue commands.

For example, by pointing to a telephone and puffing, a key pad is displayed on the screen. By pointing to the numbers and puffing, the operator can dial a number and talk through a speaker phone.

Using similar techniques, the opera-



MELANIE ROOK D'ANNA/Tribune

Lon S. Safko, president and CEO of Safko International, demonstrates how quadriplegics can use a computer. Moving the head to control the mouse and blowing into a tube opens the file

tor can use the computer as a typewriter, fax machine or a light switch. The operator can turn on a television, stereo or VCR and adjust channels or volume. By purchasing books on CDs or tapes, the operator can control a CD or tape player to listen to a book reading. In fact, the computer will control any electrical appliance or device.

Safko has spent five years developing the hardware and software. During that time, he's sold about \$500,000 worth of equipment.

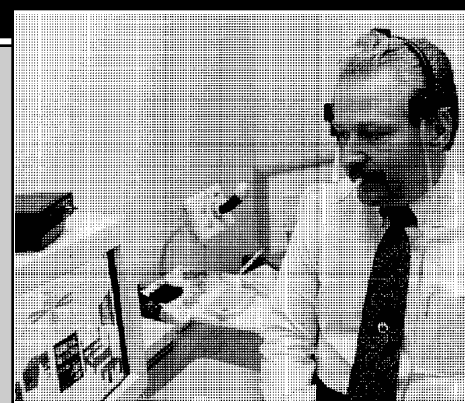
And, now that he believes SenSei has been perfected, he's starting to aggressively market the equipment to schools, hospitals, rehabilitation centers and companies that employ disabled workers.

He also is negotiating with the Swedish government to sell Swedish-language versions of the system in that country.

With an estimated 5 million quadriplegics in the United States — not to mention the new American with Disabilities Act prohibiting discrimination against people who are physically impaired — Safko believes the market is substantial.

Each system costs between \$1,000 and \$10,000, depending on the complexity of the functions being installed.

For Jimenez, the system has been a declaration of independence. She is now writing her autobiography and doing genealogy research.



BUSINESS / E1

Valley software gives quadriplegics control of home