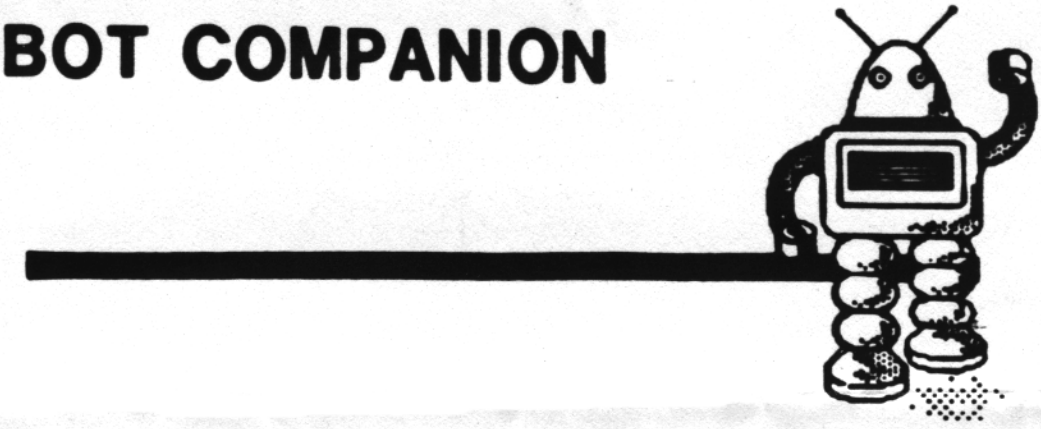
THE ROBOT COMPANION



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AGENDA

MEETING ON MARCH 16.1985 AT THE HEATH COMPUTER CENTER IN DALLAS. TEXAS

- FRONT PAGE OF THE DALLAS TIMES HERALD!!!
- DEMO OF AUDIO TRANSMISSION AND RECEPTION OF CONTINENTAL CODE BY ROBBIE AND SHUBASH!!
- MACHINE LANGUAGE LAB AT 3:00 P.M..MEETING AT 4:00
- IMPROVED BASIC - JOE ROWE
- SPECIAL USERS' LAB AT JOE'S...
- CLUB PROJECT PROPOSALS

FRONT PAGE OF THE DALLAS TIMES HERALD !!!

CHRISTOPHER BOGAN, OF THE DALLAS TIMES HERALD, INTERVIEWED IN PERSON OR OVER THE PHONE, SEVERAL OF OUR CLUB MEMBERS FOR THIS ARTICLE. HE LATER TOLD ME THAT, AS USUAL, THE ARTICLE WAS SHORTENED BY OTHER PEOPLE TO FIT THE AVAILABLE SPACE. TO OUR MUTUAL DISMAY HIS REFERENCE TO THE DALLAS PERSONAL ROBOTICS GROUP WAS CUT. HOWEVER, HE SENT ME A FIRST DRAFT COPY OF HIS ARTICLE AND I HAVE INCLUDED A SMALL PART OF IT AS WELL AS A REDUCED COPY OF THE NEWS ARTICLE ITSELF.

Robot population to grow rapidly, but use limited

ROBOT — From Page One

Americans, the Bryants have ventured beyond the world of personal computers into the realm of personal robots. Their Robbie, which plays games, sings songs, delivers wake-up calls and patrols the house as a sentry, is among the first generation of robots now arriving on the marketplace.

"I think the concept of a robot has been pre-sold to the public through 'Star Wars,'" said David Wilson, a robotics industry analyst with Future Computing, a market research firm in Dallas. "It doesn't matter whether a person is 5 years old or 50 years old, people want robots in their homes."

Already between 200 and 500 people in the Dallas area own personal robots, robotics experts estimate. The robot population in the United States — estimated to be about 28,000 in 1984, 15,000 of them personal or business models — is growing 15 times faster than the human population, according to the World Future Society, an international organization of scientists, scholars and future buffs.

Indeed, the U.S. Census Bureau several weeks ago began the first official count of robots ever conducted in this country.

"Robots are here," says Tom Mesenbourg, who is heading the robotics census, "and they're expected to grow rapidly over the next four or five years."

Today's personal robots are still many years away from the lifelike droids of science fiction. Although R2D2 and C3PO of "Star Wars" could walk, talk and mimic just about every other aspect of human behavior, today's models by comparison are still in their crawling stages.

"We are very far and many thousands of dollars from having one robot that will do your dishes, clean the windows and make your bed," says Houston robotics inventor Resa "David" Falamak. "But we are not that far away from having a robot that will do one specific job, like cleaning your windows or vacuuming your rugs."

Falamak, whose robot lawn mower won the "Golden Droid" award at the First International Personal Robot Congress and Exposition in Albuquerque last year, says his prize-winning "Robomower" prototype should be ready to go on the market for less than $1,000 within two years. In the meantime, the 30-year-old inventor is applying the same technology to a vacuum cleaner.

When all the high-tech wizardry is stripped away, a robot is merely "a computer with muscles," technology experts say, a machine that can perform human-like tasks automatically or by remote control.

In the last decade, they have become commonplace in many manufacturing plants, doing everything from painting automobiles to assembling tiny semiconductors.

But the roles they are taking over now are more visible.

A small squadron of robots with names like Fred and Louie are helping in the cleanup at the damaged Three Mile Island nuclear reactor in Pennsylvania.

A San Francisco inventor has created a robot that can understand the verbal orders of a barmaid and quickly serve up mixed drinks. A Japanese grocery store chain has set up an automated supermarket that employs 12 robotic systems, including meat-slicing robots and food-sorting robots.

Warner Leisure Inc. has developed a robot piano player called Sammy Sands, which sings and tells jokes. Alas, Sammy is currently between engagements. Warner recently closed all its restaurants, including Gadgets in Houston, where Sammy entertained.

The Defense Department is experimenting with battlefield robots, and the Southern Steel Company in San Antonio, a security equipment supplier, has signed a $30 million contract to buy 600 sentry robots to install in prisons.

Closer to home, the Dallas Police Department last year purchased a remote-control robot, affectionately called Max, which can pick up and remove bombs from buildings or ferry messages or other items to people in dangerous hostage situations.

Yet perhaps the most promising new area for non-industrial robots is the home. In the past two years, Neiman-Marcus and Sears have sold primitive personal robots through their mail order catalogues. And this month the Sharper Image catalogue based in San Francisco features Hero Jr., a robot produced by the Heath electronics company for about $1,000.

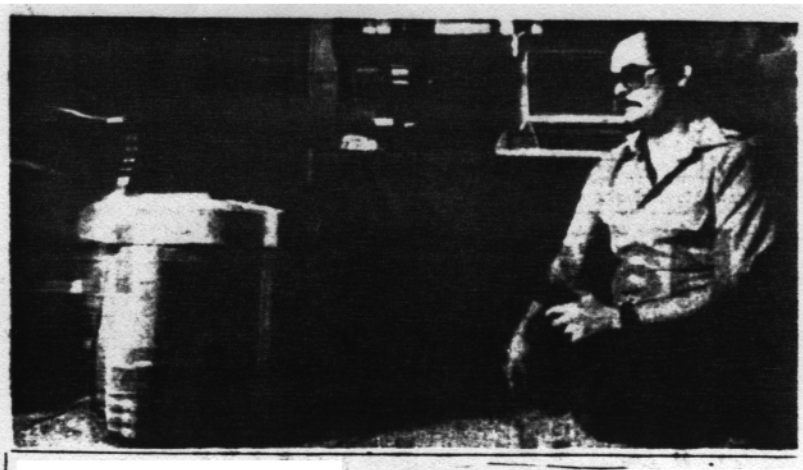
The clientele for the new personal robots are people like John Sprague of Lewisville. Sprague recently bought a Hero Jr. as an educational toy for his 6-year-old son, John Jr.

"My son practices his numbers with it, and he's learning more about computers," Sprague says.

In addition to various children's games, the Hero models can be programmed to wake a person in the morning, remind him of daily appointments and act as a roving security guard. The devices, equipped with light, sound and motion detectors, can travel a programmed circuit around a house and sound a burglar alarm if an intruder is detected.

Bob Winingham, a 36-year-old systems analyst for Sedco Inc. in Dallas, recalled the first time he programmed his personal robot, named Freddy, to stand house guard. Winingham said he went to bed and rose early the next day, spilling his morning coffee when Freddy startled him with the challenge: "Halt, who goes there?"

At Texas Woman's University in Denton, school officials bought a Hero 1 robot to be used in computer classes as an educational tool. In deference to their institution's history, they named their robot "Rosebud," dressed it in a skirt and raised the pitch of the voice synthesizer.



Joe Petrowitz / Dallas Times Herald

WALTER BRYANT of Lewisville shows off his household robot, Robbie. The 19-inch droid plays games, sings songs, delivers wake-up calls, answers the telephone and patrols the house as a sentry.

R2D2, look out

Robots' use grows in homes

By CHRIS BOGAN

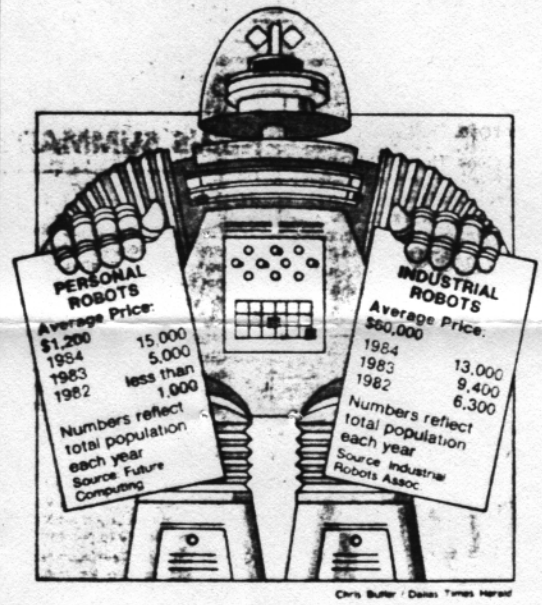
Staff Writer

Though the telephone often rings 20 or 30 times a day in the Bryant household in Lewisville, the callers frequently don't want to speak with the masters of the house. They call instead to hear the Bryants personal robot, named Robbie, answer the phone.

"Hello, this is Robbie," says the raspy-voiced, 19-inch droid. "Walter and Bev cannot come to the phone right now. If you will leave your name, number and a short message, they will return your call as soon as they can."

Like a growing number of

See ROBOT on Page 8



Chris Butler / Dallas Times Herald

The Dallas Personal Robotics Group was founded about one year ago. Local robot buffs will probably find their numbers growing even larger when the University of Texas at Arlington opens its $10 million Advanced Robotics Research Institute in east Fort Worth in the spring of 1986. The institute will be dedicated to finding practical uses for robotics technology, just as they've done at the U.S. Customs building in Washington, D.C. [illegible]

HERO-2-PC SYSTEM
by Joe Rowe

For the last couple of months I have been developing a utility to simplify the process of developing and testing software for the Hero 1. It is called "HERO-2-PC" and runs on the IBM PC and other MS-DOS computers. It requires that the Hero 1 be equiped with the memory expansion board, serial interface and BASIC. The Hero 1 is connected to the PC through the serial interface.

Hero-2-PC provides several major functions. The first of these is uploading and downloading BASIC programs between the robot and diskettes on the PC. BASIC programs are stored in text form on the PC and can be edited with any standard editor.

A second major function is the capability of dumping and modifying the robots memory via the computer. Selected areas of robot memory can be dumped in hexadecimal and ASCII format of the computer screen. The curser may be moved in any direction to "examine" or modify specific bytes of robot memory. As each byte is examined, the corresponding assembler language instruction and/or phoneme is displayed. Any byte may be modified by simply typing over it on the screen.

The remaining functions are incorporated into the interactive "terminal" mode in which you interact with the BASIC interpreter in the robot. Any of the statements or commands defined in the Hero 1 BASIC manual may be used in this mode. A number of enhanced capabilities are added to the standard ones. These include the following:

- Expanded error messages
- Keyword access to DATE and TIME variables
- PAUSE and SLEEP keywords
- Improved sensor control with ENABLE, DISABLE, LIGHT and SOUND keywords
- New MOVE commands permitting control of motor speeds
- A SPEAK keyword which translates phrases entered in English to the equivalent phonemes automatically.

HERO-2-PC does not require any additional hardware or software. It does make use of approximately 64 bytes of the robot's RAM memory starting at hexadecimal 200. It also makes use of BASIC line numbers less than 10 and greater than 9900, making them unavailable for use elsewhere in the program.

The program is still under development. I will give a demonstration of the current version at the next User's lab on March 30. A "Beta Test" version of the program will be distributed to three selected Hero 1 owners approximately May 1 and I will market the program under the ROBOSOFT name on June 1, 1985. If you have any suggestions regarding the program or would like to participate in the "Beta Test", you may reach me at 690-1575.

THE DALLAS PERSONAL ROBOTICS GROUP

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IF YOU HAVE ALREADY PAID YOUR CLUB DUES. PLEASE DISREGARD.

SPECIAL USERS LAB

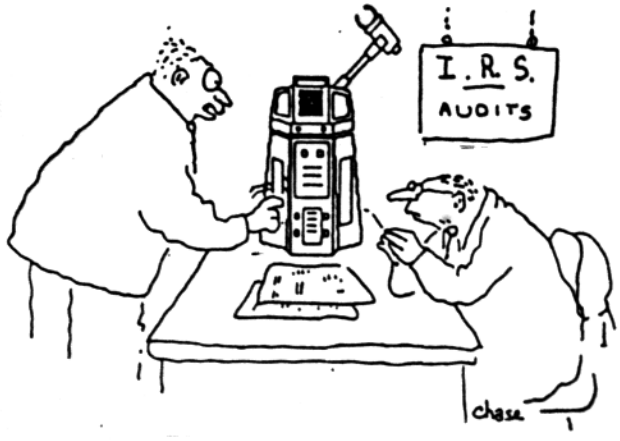
THE LAST MEETING HELD ON JANURARY 27 WAS DEEMED A GREAT SUCCESS BY ALL WHO ATTEND. AT THE LAST CLUB MEETING BUD COLLINS SHOWED A VCR RECORDING MADE DURING THE LAB SESSION. THREE ROBOTS WERE SHOWN IN A COORDINATED, (?!!), EFFORT TO PASS AROUND A COKE CAN. THEY ALSO FORMED THE CLUB'S FIRST ROBOT DUET AS THEY SANG (SLIGHTLY OFF KEY) "OLD MC DONALD HAD A ROBOT."

I HAD PROBLEMS SOLVED FOR ME IN SHORT ORDER REGARDING PROGRAMMING AND HARDWARE. SEVERAL OTHER PARTICIPANTS ALSO MADE THIS SAME STATEMENT.

THE LABS ARE TENATIVELY SVCHEDULED FOR ONCE A MONTH, TWO WEEKS AFTER EACH CLUB MEETING. THE EMPHASIS IS HANDS-ON PARTICIPATION, EXPLORATION, AND PROBLEM SOLVING. PLEASE FEEL FREE TO NAME YOUR PLEASURE AT THE NEXT LAB SESSION. JOE ROWE WILL HOLD THE NEXT LAB SESSION AT HIS HOME IN RICHARDSON. WE WILL HAND OUT DIRECTIONS TO HIS HOME AT THE MEXT MEETING, OR CALL HIM AT 690-1575.

COME MEET "GEMINI"!!!

BE SURE TO ATTEND THE APRIL 20 MEETING FOR A DEMONSTRATION OF THE NEW GEMINI PERSONAL ROBOT!! THE DEVELOPERS OF THE ROBOT FROM "ARCTEC SYSTEMS" OF COLUMBIA MARYLAND WILL BE DEMONSTRATING THE NEW GEMINI!!!



"Come on, now! Explain to the nice man, like you did to me, why I don't have to pay taxes this year!!"