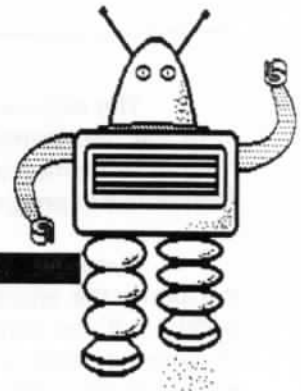


THE ROBOT COMPANION



The Newsletter of the Dallas Personal Robotics Group
March, 1989
Stan Spielbusch, Editor

MARCH MEETING AGENDA

User's lab report, by Bob Roe or Ed Rivers.

Ed Rivers will discuss plans for a new date to participate in a KERA pledge night.

Stan Spielbusch will give a treasurer's report and a membership report.

Ed will discuss the CCD meeting.

The CCD (Computer Council of Dallas) is looking for someone to run for Secretary. If interested, contact Ed Rivers. This is a prestigious position, but does not have many duties.

Ed will be handing out a 2-month calendar of club events, including meeting dates, demos, etc.

Brian Vaceluke will demo an improved version of his home navigation program.

We will decide on a date for the next user's lab, at the Highland Park High School. Check your calendar, and decide what date would be best for you. Dates under consideration are: March 18th or 19th, April 1st or 2nd.

FEBRUARY MEETING MINUTES

Brian Vaceluke gave a demo of his video digitizer interface for the HERO 2000, and we discussed possible enhancements and uses.

Brian also gave a demo of his home navigation program, which operates from a database-type description of the environment.

General club activities were discussed. I was late, so I missed most of the meeting, and the Secretary didn't give me the meeting minutes in time for this newsletter.

NOTICE! The deadline for newsletter articles is the 1st of each month! Contact me earlier if you need to make special arrangements to get an article to me, such as via modem or FAX.

NOTES FROM THE EDITOR

by Stan Spielbusch

The club needs updated information from all of its members. I'm keeping a database of the information from the membership and renewal forms, which can be very helpful at times. For example, we can determine how many members are interested in homebrew robotics if they mention it on the "ROBOTS" line, or even put "homebrew in progress".

If you haven't turned in a renewal or new member form in the last few months, please send one to me. Use the form at the end of this newsletter. Fill in all of the spaces in the form. If a question doesn't apply, just put "none" or "N/A". If you don't want your information available to other members, just mark "no" at the bottom question. However, it helps us all communicate and help each other if you allow your information to be released. We don't sell our mailing list to businesses, so don't worry about junk mail or phone calls.

On a different note, I could really use some newsletter articles from our members. Share your knowledge and become famous! Some of you have "offered" or "promised", but I haven't seen anything yet. As you can probably tell, this newsletter is rather one-sided this month, except for the President's article. I know it's not easy (believe me, I KNOW), but any paragraph or two about what you're doing in robotics, what you wish you were doing, or what your school or business is doing would be well appreciated by me and the club. Have any ideas about what you want the club to do? Write me a letter! Help!

Remember: The deadline for the newsletter is the first of each month.

PRESIDENT'S CORNER

By Ed Rivers

On February 25th, the group held its first user lab at the Highland Park High School. We had been looking at the school as a possible meeting site for quite a while, and it looks to me like it will prove an excellent choice. Bob Roe, one of our members, is a science teacher at the school. We have access to a well equipped lab and classroom. The school has its own Hero 2000 as well as several 'toy' robots. Due to the small turnout, activities at the user lab were mostly of a touring nature.

Our demo for Girl Scout troop 1380 in Garland is on April 9th. We only have one more user lab and main meeting before this date, so we have to start planning what we're going to do.

I have been contacted about doing a demo for the Fort Worth IBM PC User's Group late this year. I think these demos are a good idea, but want to hear from others.

Last month I mentioned an article in PCM magazine on Neural Networking. The March issue continues the article, and is also interesting reading. If you're interested in artificial intelligence (AI), then you might want to pick up a copy of the February and March issues of PCM. That's all for now. Hope to see you at the meeting on the 11th.

HACKERS AND HOMEBREWERS

by Stan Spielbusch

I have seen a lot of interest in homebrewing lately, which is the best thing that could ever happen to the club. As cute and easy-to-build as the HERO robots are, they just don't provide the education and enthusiasm that goes with building your own.

I probably shouldn't be talking, since my own homebrew is stuffed under a table in cannibalized pieces, BEHIND my HERO 2000, but I have felt the itching to do homebrew again. So far, I've satisfied the urge by making modifications to the 2000. This is good, too, and I hope to see many more modifications by myself and others. But I'm also anxious to see homebrew robots spring up. So, while I don't have the time to practice what I preach, at least I can try to keep this column alive.

I have received a "catalog" from Silicon Valley Surplus, in Oakland, CA. This appears to be a one-man operation, but he has some very interesting surplus. In particular, he can get you off to a great start with a set of motors/gearboxes/gears for installation on a platform with 12-inch wheels (quite large enough to roam around outdoors, maybe mow the lawn!). He also has kits for motor control, scanner inputs, and infra-red remote control. While he sells surplus, some of the "kits" appear to be of his own design and construction. Not a bad way to support a hobby, anyway!

Members of our club have bought stuff from SVS before, and have been satisfied. That's how I heard about them in the first place. If you have home-brew or other automation interests, send for their catalog.

Silicon Valley Surplus
4222 E. 12th
Oakland, CA 94601
415-261-4506

ARTIFICIAL INTELLIGENCE

by Stan Spielbusch

If you haven't heard about Neural Networks yet, you must not be reading any magazines. Nearly every computer-related magazine has had articles about neural nets, and they seem to be rapidly improving in capability and applications. If you don't know anything about them, look for a magazine. Any magazine. Basically, it's the "new wave" of Artificial Intelligence. They simulate the associative properties of the brain, and thus they're very good at recognition (speech, characters, image, etc.).

California Scientific Software sells a Neural Net simulator called Brainmaker. It allows you to design, build, train, test, and run neural nets on an IBM PC or compatible. It offers I/O facilities for visual or symbolic data manipulations, and runs at up to 500,000 neural connections per second. (No, that doesn't mean anything to me, either. Big number, though, ain't it?)

Simple neural nets are included on optical character recognition, speech recognition, speech synthesis, image recognition, and image enhancement. The price? \$99.95. This is the cheapest simulator I've seen, and yet it appears to be great for learning about them, and maybe even good enough for a real application! Contact California Scientific Software, 160 East Montecito, Suite E, Sierra Madre, CA 90124. (818) 355-1094.

If you want to learn more about nets from a programming standpoint, I have seen (but have yet to read) two sizeable articles recently. One in Dr. Dobb's Journal of Software Tools, January 1989. The other in The C User's Journal, April 1989. Both of these articles have program listings with them, so they will provide a great start, if not a complete simulator (I haven't looked closely enough to determine what the source code does). Whoever gets a neural net working, please consider giving the club a demo! This could really make personal robotics interesting and worthwhile! Imagine using Brian Vaceluke's image digitizer, with a neural net program, to recognize individual people (or other robots), or distinguish between a can of Coke and a can of Pepsi!

HERO 1 / HERO JR.

by Stan Spielbusch

Well, I haven't gotten any commitments yet, but I believe we now have members who have the BASIC cartridge, the Programming Language cartridge, and the RS-232 interface for the HERO Jr. All I need now is someone to tell me they can duplicate the cartridges and interface. How about it, hackers? Let's get this job done!

I have recently heard from two new people in South Dakota who have HERO Jrs, and they are anxious to provide and receive HERO Jr. assistance through our club. They were referred by Walter Glod, who suggested that we could help them. If anyone else out there knows HERO Jr owners (or any other robots, for that matter), PLEASE put them in touch with us! Eventually, we'll have a nice network of members to help each other out.

Bob Fewel would like to know if anyone has any solutions to a static electricity problem in the Jr. (his chips are getting fried). He's considering placing a diode and a 1 Megohm resistor between board and chassis ground to bleed off any static when HERO is docked and charging. Has anyone tried this, or have a better solution? If so, contact him at 317 E. Van Buren, Rapid City, SD 57701.

Other HERO Jr. owners that would like correspondence:

Allen Hilburn, 811 9th St., Rapid City, SD 57701

Richard Jolles, 294 Clevelandtown Rd, Boonsboro, MD 21713

HERO 1 and HERO Jr. owners!

Fill this space with an article about your robot projects!
I don't care how "simple" they were, or even if they worked or not!
Put your name (and your robot's name) in print!
Become famous instantly!
Tell your friends!

FROM THE LIBRARY

by Stan Spielbusch

Not much activity with the library lately. Now that the holidays are over, let's get cracking!

If you have a program to submit, put it on an MS-DOS format disk (double sided, double-density standard format) and bring it to the meeting or send to:

Stan Spielbusch, 2404 Via Barcelona, Carrollton, TX 75006

***** Please ***** include a description of the program, either as comments in the program or as a separate .DOC file. I don't have the time to study each program to figure out what it does!

When you submit a disk, you receive credit for 1 disk in return. Let us know which one(s) you want, or if you just want your original disk back.

We currently have 3 disks in the library -- a HERO-1 BASIC disk, a HERO-2000 BASIC disk, and a HERO-1 Assembler disk.

If you want a copy of a disk, the best way is to bring a blank, formatted PC-DOS/MS-DOS disk to the meeting and trade with me there. If you forget to bring a disk, we will have to collect \$2.00 per disk. Mail-order -- \$3.00 per disk -- no need to include a disk with order. Send orders to Stan (address above).

CLUB INFORMATION

The Dallas Personal Robotics Group is a non-profit organization of individuals interested in learning about personal robots, sharing ideas, working on projects, and informing the public about the world of personal robotics. We are open to anyone who has an interest in personal robotics, whether or not they currently have a robot, and whether or not they have any knowledge of robotics.

To become a member and receive the newsletter, have access to program library, and be involved in our monthly clubs and user's labs, simply fill out the form below, and send it with \$10.00 to Walter Bryant, Treasurer (address below).

If you are interested, but not sure you want to be a member, feel free to visit our meetings. If you like, we can send you a sample issue of the newsletter.

Tentative Meeting Schedule (1989)

Mar 11 April 8 May 20

Meeting times and location: 2:00 P.M. at the Dallas Infomart.

Club officers:

President: Ed Rivers
Treasurer: Stan Spielbusch

Vice-president: Brian Vaceluke
Secretary: David Ratcliff

Back Issues

Back issues are now available in three sets. Each set is \$5.00, plus \$2.00 postage and handling if ordering by mail. Set 1: From the formation of the club in 1984 through 1986. Set 2: 1987. Set 3: 1988. Issues from 1989 are \$0.50 each, plus \$0.25 p&h. Contact Stan Spielbusch, Editor, 2404 Via Barcelona, Carrollton, TX 75006.

MEMBERSHIP APPLICATION

Dallas Personal Robotics Group
c/o Stan Spielbusch 2404 Via Barcelona Carrollton, TX 75006

Check one: () Renewal () New Member () Info Change () Sample issue request

NAME (please print) _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

HOME PHONE (____) ____ - _____ WORK PHONE (____) ____ - _____

TYPE OF ROBOT (if any) _____

TYPE OF COMPUTER (if any) _____ MODEM? _____ BAUD _____

Do you want the above information available to other members? _____