```
*******************************************************************************
*                        THE ROBOT COMPANION                                  *
*                                                                             *
*                         The Newsletter of the                              *
*                      Dallas Personal Robotics Group                        *
*******************************************************************************

             ***********************************
             *    (September) October, 1988    *
             ***********************************
```

As all of you have probably noticed, there was no news letter last month. The
DPRG News letter is undergoing a change. Stan Spielbusch is going to share
the thankless pleasure of editing the monthly news letter with several assistant
editors: Walter & Bev Bryant and Brian Vaceluke. The staff will alternate
editing sesions. This letter will be done by Brian. However, I feel so guilty
about this letters meager contents that I will also do the next months letter.
Please bear with me as I learn the ropes; next months letter can't get any
worse.

Please accept the news staff's apology in last months letter oversight. We
are especially sympathetic to our out of town members.

```
*******************************************************************************
*                August, September Meeting Minutes                           *
*******************************************************************************
```

Much has happened. I don't know where to start, so I wont.

```
*******************************************************************************
*                           What's new...                                    *
*******************************************************************************
```

As many of you have noticed the DPRG Bulletin Board has been busy for the last
month or so. Do not worry the bulletin board is still around. David Ratcliff,
the board opperator, says that he has had some trouble with the board computer's
hard drive and that the board will be up as soon as he can fix it.

Victer Sturm is willing to loan out his "Foundation Series" books by Isac
Asimov at meetings provided that they will be returned by the next two meetings.
(A complete book listing is available upon request.)

```
*******************************************************************************
*                       October Meeting Agenda                               *
*******************************************************************************
```

The October meeting will be held at 2:00 P.M., October 15th at the Infomart.

Walter and Bev will show the Fisher Price video camera that they have bought
in the hope that it will be the birth of a Hero 2000 vision system.

Victer Sturm will show his home brew robot, which is presently under
construction, and he will explain his plans for its future.

```
*******************************************************************************
*                       HACKERS AND HOMEBREWERS                              *
*******************************************************************************
```
                           by Brian Vaceluke

What is Video?

I chose to write about video this month in an effort to give an APPROXIMATE explaination to how it is trasmitted from a camera (such as one on a "machine vision" robot) to a TV screen or even better, a video frame grabber (a device used to convert video signals to computer signals.)

A video picture on your TV is made up of many horizontal lines (of varying intensity) stacked up on top of each other. These lines are traced out by a single dot on your screen that goes from left to right over and over while it slowly moves from the top down the screen. (in the same pattern that you read.)

In video, timing is everything! There are thirty picture transmissions per second, and there 525 lines per picture. Therefore, there are 15750 lines per second or 63.5 micro seconds allowed for each line of information. (This is the time that it takes the dot on the screen to go from left to right.)

There are two parts to video: The active portion (This is the intensity of the dot as it scans.) and sync (This tells the dot where to be on the screen and when.) Both of these parts are carried on the same wire as different voltages.

Any voltage between about .4 volts and 1.4 volts is the picture intensity. The higher the voltage the brighter the dot. Any voltage under .4 volts, such as zero volts, is sync. Since this voltage rarely occures durring the picture transmission, and it is short in duration, it is called a "pulse."

There are two types of sync: Horizontal Sync (This tells the dot that it is at the far right of the screen and it should go back to the left and it should also go down to the next line to continue scanning; much like a reader reaching the end of a line of type in a book.) and Vertictal Sync. (This tells the dot that is is at the bottom right of the screen and that it should return to the far "top left" of the screen to begin to scan another picture; much like a reader turning the page in a book.)

Vertical sync pulses are different from horizontal sync pulses in that they last a longer time.

A horizontal sync pulse occures at the end of every line of information, and a vertical sync pulse occures at the end of every picture.

As the voltage in the video signal varies between .4 volts and 1.4 volts the dot on the TV screen is automaticaly going from left to right. Where along its path of travel that the dot is, when the voltage is what ever it is, will be the intensity of the picture at that point.

This is all incredibly complicated (or boring?); however, it is neccesary to know, if you want to make a device that decodes this signal for a computer (or a robot) to see.

```
*****************************************************************************
*                           HERO 2000 News                                 *
*****************************************************************************
```

Brian Vaceluke is going to TRY to build a "video digitizer" that will let the HERO 2000 see with a standard video camera, or the Fisher Price Video Cam Corder that can be bought at "Toys R Us" for around $100.

```
*****************************************************************************
*                        HERO 1 / HERO JR NEWS                             *
*****************************************************************************
```

Repeat from last two months:

John Sprague (not a member) has a HERO Jr. robot for sale. It has:
        24K memory
        I/R motion detector, voice, etc (standard features)
        BASIC cartridge!
        RS232 interface!
        Programming Language cartridge!
        Misc. cartridges (Songs, games, etc.)

Call John Sprague, 484-8270 evenings.


```
*****************************************************************************
*                        CLUB INFORMATION                                  *
*****************************************************************************
```

   The Dallas Personal Robotics Group is a not for profit club dedicated to the exchange of ideas and information about home robotics.

   The Dallas Personal Robotics Club has a bulletin board that can be reached at 231-2836. It is 300, 1200, or 2400 baud. None members are encouraged to call in also.

Upcoming Meetings: Oct 15   Nov 19   Dec 17

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

        President: Bev Bryant   Vice-president: Ed Rivers
        Treasurer: Walter Bryant   Secretary: Brian Vaceluke

   A complete set of back issues, from the formation of the club in 1984 to the present is available for $3.00. Add $2.00 postage & handling if ordering by mail. Contact Stan Spielbusch, Editor, 2404 Via Barcelona, Carrollton, TX 75006.

               M E M B E R S H I P   A P P L I C A T I O N
                     Dallas Personal Robotics Group
          c/o Walter Bryant, 814 Mockingbird Circle, Lewisville, TX 75067

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

NAME (please print)_____

ADDRESS_____

CITY_____STATE_____ZIP_____

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

TYPE OF ROBOT (if any)_____

TYPE OF COMPUTER (if any)_____ MODEM? _____

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