Robot Vision Class Project

April 20, 2000 - Due for discussion April 27, 2000

Situation

The Pothole Group of the UC Robot Team needs a camera and frame grabber board with support software drivers and C++ image processing package. The input to the frame grabber will be a real time video signal from a black and white Panasonic camera with RS 170 format.

Specifications

The frame grabber needs to be able to capture images at 30 frames per second and permit processing at about 10 frames per second. The processing steps are:

1. **compute image histogram**
2. **perform threshold operation**
3. **locate largest circular region**
4. **compute center and radius of circular region**
5. **send these values back to the control computer**

A display of the captured image is also needed during program development.
Computer interface drivers are needed for DOS and Win3.1 and Windows 98.
Computer support software is needed that can make it easy to read an image, display an image, compute a histogram, and add user developed C++ subroutines.

Frame Grabber/Image Capture Board Vendors from

http://www.panasonic.com/medical_industrial/frameGrabber.html

	Company		Company
1.	Alacron (609) 891-2750	8.	Epix, Inc. (847) 465-1818
2.	Bitflow, Inc. (617) 932-2900	9.	Imaging Technology (617) 275-2700
3.	Cognex (508) 650-3000	10.	ImageNation (503) 641-7408
4.	Coreco, Canada (514) 333-1301	11.	Imagraph (508) 256-4624
5.	Data Translation (508) 481-3700	12.	Matrox Imaging, Canada (514) 685-2630
6.	Datacube (508) 777-4200	13.	MuTech, MA (508) 663-2400
7.	Dipix Technology, Canada (613) 596-4914	14.	VisiCom (781) 221-6700

In class each of us will select one company and obtain information on their product and a cost estimate to compare next week. You may use the www or telephone. Prepare a one page handout for everyone (10 copies).